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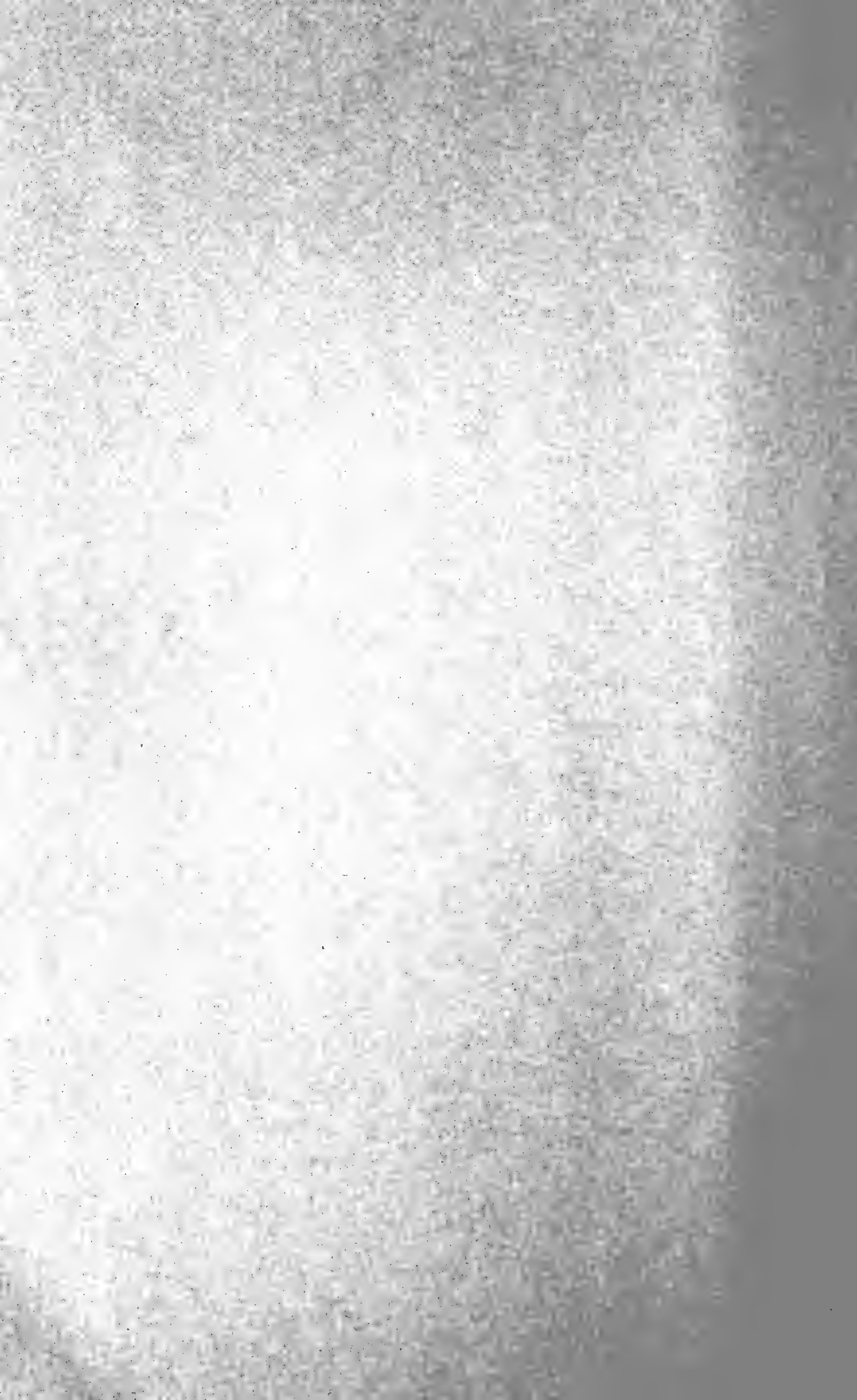
Topical index - 1955

Hall, J. G.

1954 and 1957

Catalogue

nos. 1 - 83



J. G. Hall
1954

Catalogue

1

Trail Canyon, 8900ft, White Mts., Esmeralda Co., Nevada

May 26

✓ 1 Stellers Jay 104.0 g

May 27

✓ 2 Green-tailed towhee 25.1 g

May 28

✓ 3 White-crowned sparrow 25.9 g

✓ 4 Brewer's sparrow 11.4 g

Indian Canyon, 7400ft, White Mts., Esmeralda Co., Nevada

May 30

✓ 5 W. wood pewee 14.6 g

✓ 6 ♀ Lazuli bunting 14.9 g

✓ 7 ♀ Red-shafted flicker 138.6 g

May 31

✓ 8 Stellers jay 94.8 g

9 ♂ Neotoma lepida 59.4 g

202-75-28-29
5 emb. x 2 mm.

10 ♀ Microtus longicaudus 181-50-23-16 46.9 g

11 ♀ Microtus montanus 150-33-21-15 32.1 g

12 ♂ M. montanus 135-25-20-13 21.5 g

June 1

13 Uta stansburiana

14 ♀ W. wood pewee ova small 12.1 g

To Exchange
Collection ✓ 15 ♂ House wren testis 6 mm. 9.1 g

June 2

16 Sceloporus

17 Cnemidophorus

18 ♀? Sorex palustris 144-65-20-3 10.5 g

3 emb x 13 mm.

19 ♀ Reithrodontomys megalotis 131-62-15-15 14.5 g

Indian Creek, 7400ft, Esmeralda Co., Nevada

June 2

skull
only

20 ♀ Reithrodontomys megalotis 131-62-17-14 6.8 g

21 ♀ Sorex palustris 150-66-20-2 9.0 g

22 ♂ Poor-will testis 7mm. w 54.2 g

June 3

23 Cnemidophorus

24 ♂ Eutamias 103-88-31-20 43.8 g

25 ♂ Warbling vireo testis 6mm 10.3 g

Cabin Creek 10,500ft, White Mts, Mono Co, Calif.

June 4

26 ♀ Audubon's warbler laying 13.9 g

27 ♀ Vesper sparrow 3 collapsed follicles, ova 2mm. 25.5 g

28 ♂ Horned lark testis 8mm. 27.2 g

Wyman Creek,

Roberts Ranch, 8200ft, White Mts., Inyo Co., California

June 6

29 Garter snake (spotted?)

June 7

30 ♂ Brewer's sparrow testis 10 mm 11.3 g

31 ♂ Empidonax ^{wrighti} testis 6mm. 11.4 g

June 8

32 ♀ Violet-green swallow ova to 10 mm. 15.7 g

33 ♂ Mt. Chickadee testis 6mm 11.0 g

34 ♂ Tolmie warbler testis 8mm 10.9 g

35 Saw-whet owl 73.3 g

J. G. Hall
1954

Catalogue

3

Roberts Ranch, 8200ft, Wyman Creek, White Mts.,
Inyo Co., Calif.

June 9

36	♀	<u>Peromyscus</u> <u>crinitus</u>	169-89-20-19	16.9g
37	♀	<u>Peromyscus</u> <u>truei</u>	172-88-23-25	21.7g
✓ 39	♂	Junco	testis 8mm.	18.0g.
✓ 40	♂	White-crowned sparrow	testis 13mm.	30.0g

June 10

✓ exchange Collection	41	♀	Cottontail	embryo 15mm	365-30-90-70	855.1g.
	42	♂	Warbling vireo	testis 6mm.		10.2g
✓	43	♀	Fox sparrow	brood patch ova 10 6 mm.		30.0g
✓	44	♀	Spotted towhee	ovum 2mm, brood patch		31.4g

June 11

45	♂	<u>P. truei</u>	178-85-21-27	21.1g
46	♂	<u>P. crinitus</u>	169-87-20-19	14.0g.
47	♀	<u>P. crinitus</u>	179-86-19-21	16.3g
48	♂	<u>Eutamias</u>	217-96-31-17	<u>46.4g</u>

Cottonwood Creek, 9300ft, White Mts., Mono Co., Calif.

June 11

✓	49	♂	Hermit thrush	testis 11mm.	27.5g.
✓	50	♂	Crossbill		34.5g.

Roberts Ranch, 8200ft, Wyman Creek, White Mts., Inyo Co.,
Calif.

June 12

✓	50	♂	Crossbill	testis 2mm.	34.5g.
✓	51	♀	Crossbill		30.7g

June 13

✓	52	♂	<u>Empidonax</u>	testis 7mm.	10.7g.
✓	53	♂	<u>Empidonax</u>	testis 6mm.	11.2g.

J. E. Hall
1954

Catalogue

4

Roberts Ranch, 8200ft, Wyman Creek, White Mts., Inyo Co., Calif.

June 13

54 ♂ P. crinitus 152-76-20-20 12.1 g.

✓ 55 ♀ Steller's Jay (Coll. F.S. Williamson) 95.5 g.

Wyman Creek, 7500ft, White Mts., Inyo Co., California

June 13

✓ 56 ♂ Steller's Jay (Coll. F.S. Williamson) 100.4 g.

Wyman Creek, 6750ft, White Mts., Inyo Co., Calif.

June 15

57 ♀ Peromyscus 168-73-20-20 20.2 g.

58 ♂ Sceloporus

✓ 59 sex? Gnatcatcher 5.9 g.

✓ 60 ♀ Crossbill 33.8 g.

✓ 61 ♂ Gnatcatcher testis 6 mm. 5.6 g.

✓ 62 ♀ Steller's Jay 95.7 g.

✓ 63 ♂ Spotted Towhee testis 11mm. 34.9 g.

June 16

64 ♀ Perognathus parvus 182-95-24-8 22.0 g. lactating; only 1 ear pinna

65 Sceloporus

66 Cnemidophorus

67 Cnemidophorus

68 Crotaphytus

✓ 69 ♂ Desert sparrow testis 6mm. 14.2 g.

June 17

70 ♀ Reithrodontomys 150-71-18-15 14.7 g.

71 ♂ Reithrodontomys 150-73-19-14 12.3 g.

✓ 72 ♂ Spotted Towhee 33.9 g.

✓ 73 ♂ Long-tailed Chat testis 10mm. 25.2 g.

J.G. Hall
1954 &
1957

Catalogue

5

Wyman Creek, 6750 ft, White Mts., Inyo Co., California

June 17

- ✓ ✓ 74 ♂ Cowbird (Coll. F.S. Williamson) testis 6mm. 35.4g

Sagehen Creek, 3 mi. W. Hobart Mills, Nevada Co., Calif.

June 19

75 Rubber boa

76 Rubber boa (Coll. by R. Gard)

June 30

- ✓ ✓ 77 ♂ Ruby-crowned kinglet 6.6g.

July 25

- 78 ♀ Tamiasciurus douglasi lactating, 7 emb x 11mm
333-121-53-29 311.2 g.

August 10

- 79 ♀ Castor canadensis 950-251 (tail from
base of scaly portion to tip)
174 - 42 15300g lactating, no emb.

- 80 ♀ C. canadensis 626, —, —, 30 3400g

1957

Inverness Dr., Daly City, 600 ft, San Mateo Co., Calif.

Sept. 20

- 81 ♂ Mus musculus 164-78-18-14

Skyline Blvd., Daly City, 600 ft, San Mateo Co., Calif.

Oct. 2

- 82 ♂ Microtus californicus 155-40-21-16

Golf Course, just E. of L. Merced, San Francisco, Calif.

Oct 16

- 83 ♂ Reithrodontomys ~~eximius~~ megalotis (Coll. Enes Millar)

118-64-15-14

7.4 g

Hall, J. G.

1952

Journal

J. G. Hall
1952

1

21 June Sagehen Creek, Nevada Co., Calif.

10 AM. Started upstream from camp (at the Springs) looking for beaver sign. Lots of aspen, all sizes untouched all the way up to the old trestle. Ground still very damp & marshy in places. Patches of snow left here & there in deep shade. Stream v. high. Aspen very thick still and about $\frac{1}{2}$ mile or so we came upon what must be the large, new colony Bob Hoffman & Eli Pietuk have been referring to. Some signs of winter cutting and a good deal of recent cutting. One 10" aspen cut so recently that the new leaves (most of the aspen are still in new leaf, the largest about $\frac{3}{4}$ max. size) were still unrolled. The tree lay where it fell and the beavers had stripped off much of the bark on the basal section up to about the 20' mark. According to what the lit. says, the young, upper sections of bark are supposed to be favored over tough old

J.G. Hall
1952

2

21 June Sagehen Creek, Nevada Co., Calif.
bark of larger diameter, so this
will be something to watch for.
Some evidence of old cuttings, too. Want
to find some of the oldest cuttings
on trees that are still alive. May
be able to get some idea of age of cut-
ting. Took kodachrome of a partially
cut tree of about 11" in diam. just
above the cut. A no. of completely
peeled logs lying in the water.
Lots of peeled & unpeeled logs
cut by beaver & lying, better shel-
ter in the pond. A good house
adjoining shore and about 15' ~~at~~
water-level diameter & about 5'
above water level. Seems to be
built around a high stump
which was perhaps cut by
beavers a year or more ago in
the winter. Couldn't figure out
where entrance was for sure
as there was a channel-like
excavation that went partially
through the house just below
water level but then emerged on
other side. Since this is very
high water, the entrance is prob-

J. G. Hall
1952

3

21 June Sagehen Creek, Nevada Co., Calif.
ably farther below water level +
on the side where the water
is quite deep, probably now
at least 5' in some spots.
Even now when water in the creek is
so high, it is very clear + doesn't
carry any silt to speak of. The
bottom right next to the house
where current is presumably
slowest is gravelly and doesn't
seem to have any of the silt
deposit supposed to be character-
istic of beaver ponds. Maybe that
is only characteristic of old ones.
Bottom sampling of this pond will
be interesting. Aspen surrounding
this pond are extremely plenti-
ful in all sizes. In a couple
of places they occur in stands
from the stream right on up
the hillside for 30 or 40 yds. They
can't dig canals to the distant trees
so it will be interesting to note
how far they will go from the
pond to cut trees. The dam seems
to be in fair condition but, as
we noticed in May, it's hard

J.G. Hall
1952

4

21 June Sagehen Creek, Nevada Co., Calif.

to tell just where they begin
& leave off when the water
is so high. There is some alder
and pine (l. pole) + a shrub ^{Ceanothus} ~~Chimaphila~~
scattered around the pond. At
one place they cut & ate sparingly
from the shrub. Didn't notice
cuttings of alder & pine but
may on a more thorough in-
spection. Wood Pewee at pond.

Left pond about noon & continued up-
stream on north side. Watched two
♂ red-naped sapsuckers work over
two huge lodgepole stumps. Found
two old beaver cuttings a couple of
hundred yards above the colony
and on a spit which separates
the creek from a major trib flow-
ing from the south. This is
below where the road crosses
the stream. Crossing flooded. There
is a great deal of aspen everywhere
but seemed to be less concentrated
by stream border than below.

^{Ceanothus} ~~Chimaphila~~ increasing as we
went higher. Grows very close in
places like manzanita. Kept on

J.G. Hall
1952

5

Sagehen Creek, Nevada Co, Calif.

21 June up stream, turning South to follow what seemed to be the main flow, though many tribs join in & with the dense growth & split channels of main stream, make it a tough decision. Lots of aspen in very thick stands, but not concentrated on stream borders. More fir than below, some Tremendous ^{Ceanothus} poles & much more ~~Chingnapis~~. Wonder if beaver would work up this high. ^{Ceanothus} ~~Chingnapis~~ got so thick that we started back about 3. Followed the road most of the way back instead of the stream. It turns into abandoned RR bed after a while. Chipmunks in amongst the ties. Redtail soaring way north over top of the ridge. Saw & heard warbling vireos (we think). At trestle where RR swings way in North to cross a trib I cut south following the trib to the Sheep-shed meadow, Beth followed ties & we met a little East of the meadow. Got back about 4:20. Weather in AM was hazy, gradually clearing up by noon & continuing

J. G. Hall
1952

6

Sagehen Creek, Nevada Co., Calif.

21 June clear for rest of day

Independence Lake, Nevada + Sierra Cos.,

24 June Calif. Arrived about 10:15 AM on
truck & the boys who were going
to check cut-throat spawning at
lake's inlet. Betty & I started up
over the ridge SE of the lake,
heading in SE direction from the
NE end of the lake at about 10:40.
Saw what we were sure were red
firs for first time. Big Jeffries & fine
open forest on Indep. side of ridge
but towards top manzanita & ^{ceano-}~~chug~~
^{other} ~~pin~~ gets thicker & on Sagehen side gets
almost impenetrable. Saw fox
sparrows & white crowns on top. About
halfway down a red-tail screamed
& circled us in a grove of large
Jeffries. Had nest in one about 75'
off ground. Noticed a Swainson's
at Indep. before we left. Hit
Sagehen just below beaver pool,
where we had lunch. ^{Saw a little shrew (Sorex?) 5' from edge of pond!} Took off
upstream about 1:30 to find Hoff-
man's lean to and continued
to skirt around the basin at
lower limits of ^{ceanothine} ~~chug~~.

J. G. Hall
1952

7

Independence Lake to Sagehen Creek,
24 June Nevada Co., Calif. Saw a sparrow-
sized bird - bright rufous cap
which seemed to be erectile. Olive-
yellow washing on ~~crissum~~ ^{Green-tailed Towhee} & wing
coverts, may have been a rufous-
crowned sparrow. It was in bushes
about 15' from stream on a dry
rocky hillside. Going through
this stuff ~~climacophora~~ ^{Ceanothus}, man-
zanita & alder unbelievably
tough at times. Met the 2 Hoff-
man's about 3 and we contin-
ued to make a circuit of his
red & white fir area. Crossed
the main trib which flows N
into Sagehen & found some
old beaver cuttings. Not very ex-
tensive and aspen rather com-
mon but not nearly so thick
as it is on some stretches of
the main stream farther
down. Scared a little sparrow
like bird off her well-con-
cealed nest on the ground
beneath some prostrate
Ceanothus. Her nest was 15 or
20 feet from the stream,

J. G. Hall
1952

8

June 24 Independence Lake to Sagehen Creek, Sierra
Nevada Cos., Calif. across which
she flew & we weren't able to
spot her for ident. Small, grass-
lined nest about 3" across
held 5 whitish eggs & rusty
blotches on blunt ends. A little
farther down stream we al-
most caught a Zapus, right
next to the stream, in amongst
the mat of alders. It finally
escaped by jumping into the
stream and, to our amazement,
swam quickly upstream 3 or 4
feet into another alder tangle.
Hit the main stream & followed
it down on S. side. About 50 yds
down from beaver pond came on
a dead doe which had been
partially eaten. Couldn't tell
what killed it. Not covered up
at all as lions might do. Org-
ans of body cavity still fairly
intact. Have to look it over to-
morrow. Came on down to sheep
skin meadow, crossed over &
came on down to camp about 4:30.
Generally cloudy all day, clearing up in P.M.

J. G. Hall
1952

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June 25 Independence Lake, Sierra Co., Calif. 2 PM

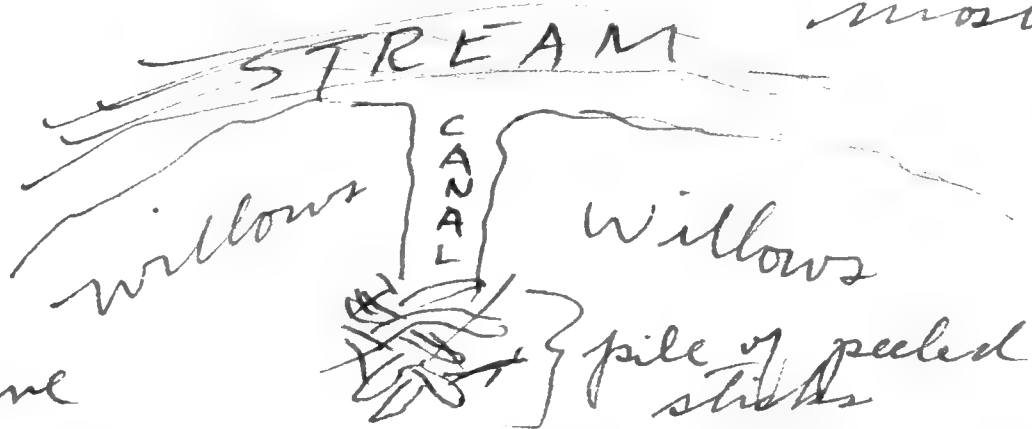
Arrived with Glenn Flittner at NE end of lake via truck. Weather threatening. Started down lake in motor boat to pick up gill net set previous day on N shore about half-way down. As soon as we started off, a real hail storm descended and we could see it was especially violent at SW end. Hauled in gill net which had 10 suckers (a couple \pm start of breeding coloration), 1 Rky Mt. Whitefish, 2 brook trout and 1 tremendous brownie which weighed $6\frac{1}{4}$ lbs. This net was in 35' of water. Storm let up by this time & we pushed on to end of lake where 6 fishermen were taking cut-throats illegally (within 300 ft of the inlet). The cut-throats are beginning to prepare to spawn ^{in the inlet} as the boy saw over 50 fish in the shallows of the gravel, some singly, some in pairs and one pair making a nest. Glenn & I worked right up to the beaver colony which is about 500 yds upstream. This colony is located in a grove of very large, old aspen, some 2' in diam. Many large trees have been cut or are being cut; one I photographed had an estimated diam. of 16" at the top of the cut & 2' at the

June 25 Independence Lake, Sierra Co., Calif.

base of the cut. There are few small trees (aspen) right in the heart of the colony but much that is smaller is nearby & appears to be available w/o much overland travel. Willows extremely thick at borders of stream and the beavers are making some use of these. In one clump of willows a canal 4 or 5 feet long had been cut from the water's edge. On the ground at the end of this canal was a pile of peeled logs or sticks,

an inch
& less in
diam.

Didn't have
time to examine



it closely or to determine whether these sticks were mostly aspen or willow, tho' they were probably willow since I found a similar "feeding platform" at the rockslide colony and it too was in a willow clump. There are 3 or more fair-sized dams and they appear old & well-maintained. Good layers of silt in pools above the dams. The fish seem to have no

J.G. Hall
1952

11

June 25 Independence Lake, Sierra Co., Calif.

particular trouble in travelling upstream over or around these dams, at least in this season of the year when the stream is so swollen that it by-passes the dams in many places. Today Glenn found 6 trout upstream from the dam. There were probably many more below it but Glenn believes that the number of fish upstream depends upon the amount of competition for nesting sites downstream. Therefore the effect, if any, of the dams + ponds upon upstream movement of these fish at this time of year is not at all clear-cut. It will be worthwhile to check on movement upstream in the fall of the browns + brooks, when the water is lower. Didn't find any house, at least what I thought was a house. May later when we have a longer visit. Much evidence of deer activity here as at the other colonies. Noted several pairs of ant-throats patrolling or guarding their areas in the course below the dam. We reached our boat about 4:45 and the fishermen had caught 3 more cuts. 3 not ripe

J. G. Hall
1952

June 27 Sagehen Creek, 3 Mi. N Hobart Mills, Nevada Co.,

Calif. Rockslide Colony to Route 89, 11:15 AM

This colony appears to be older than the one upstream. Bottom more heavily silted and most of the aspen cutting is weathered. Emphasis seems to be shifted here from aspen to willow. Most of the near-shore aspens have been cut, though there are some relatively thick stands farther up the rockslide. The willows are very dense all along the stream and show signs of much use past and present. Found one feeding platform cut back in the willows and covered \bar{c} peeled willow sticks. The tips of almost all willows overhanging the water have been trimmed. About a dozen mature poles stand dead in the middle of the pond, drowned by the water. Hairy woodpeckers nesting in hole ⁱⁿ one of these. All of the aspen ^{stumps} ~~cut~~ standing on the rockslide, except the most recent, have profuse sprouts 2+3 feet long. This wasn't noticed in other areas where aspen have been cut but may occur. We aged

J. G. Hall
1952

June 27 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

some typical-looking sprouts by counting nodes + growth rings and they were 3-4 years old. We'll have to do this more systematically later + see if we can tell when the stumps were first cut. Only question is: how soon after being cut do sprouts begin? If these sprouts are 3 years old not counting this year's growth, the stumps were cut in 1948 or earlier. Small branches of small l'poles have been barked clear to tips in some cases. Probably porkey work. Beaver don't seem to be cutting these small aspen sprouts at all, don't know why not. This past winter when snow was deep they cut some 3 & 4 inch trees as far as 30 yds from water and as high as 10' from the ground. Lodge constructed around a giant fallen l'pole on north shore. a feeding pile of aspen logs (peeled) lies on house. Very little ^{soil} but these contorted aspens seems to be able to

J.G. Hall
1952

June 27 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

live on the rockslide north of the pond. Some raspberries & other low herbs. Many of the rocks are covered with a hard white deposit which looks like bird white wash but is extremely hard and can barely be scraped off with a knife. Down in the crevices between such rocks are piles of little droppings probably of some rodent. Heard some peculiar chirrings coming from deep down between these rocks but didn't see anything. Found a Hyla of some kind perched on one of the boulders. Main dam is just downstream from lodge and there are smaller ones above & below it. Extensive signs of willow cuttings, mostly old, continues downstream for at least 100 yds. Some canals. Just above intake is another dam-like structure. The boys insist it is a beaver dam & it probably is, though at high water it's hard

J. G. Hall
1952

June 27 Sagehen Creek, 3 mi NW Hobart Mills, Nevada Co, Calif.
to tell pile-up jams from
dams. Didn't see much nearly
cuttings or a lodge; it may
be a subsidiary dam of the
rockslide colony although it
is several hundred yards
downstream from it. Song
sparrow singing from dead
snag overlooking willows.
Continued downstream to where
creek passes under route 89.
On way down saw 2 pileolated
warblers in willows below the
intake, a white-breasted
nuthatch entering a cavity in
top of a 90' dead snag on which
red-naped sapsuckers were
also seen. Yellow warbler and
♂ Western Tanager seen in small
lodgespoles. Warbling vireo sing-
ing in lone l'pole standing in
sea of willows. Only beaver sign
was a couple of fresh 1 & 2" aspen
stumps about $\frac{1}{2}$ way between the
highway bridge & the lumber-
road bridge. Reached 89 by 3 P.M.
Weather cool & cloudy all day.

J. G. Hall
1952

July 2 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

2 PM. Started downstream from where highway 89 crosses. Visited the roadside colony for a while. This seems to be a well established colony with most of nearby aspen cut. Some sprouting from stumps, mostly of 3" diam. Counting nodes indicated sprouting started 1949. (\therefore cut fall of '48?).

Good willow supply. A great deal more grass than found in other colonies. Some winter high-topping of aspen 6-7' from ground. Most aspen cut 15' or closer to water. Some willow use. Although it covers a larger area than rockslide colony, first impression based on subjective measurements of willow use + aspen use is that this colony is intermediate in age between rockslide + highest. Several downed trees^{6"} only partially used, smaller branches trimmed + removed + bark eaten off main trunk in a couple of places. Large + small pines killed by drowning. About 5 small dams in series, about 20-50 yds apart, lodge between 2nd + 3rd dams. Pond gets deep, about 5' in vicinity of lodge. Several 1" willow stumps show sprouting, mostly growing from 1951 on. Pewee + sapsucker seen on + around dead snags killed by

J. G. Hall
1952

July 2 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif

the water. Well-trampled path from aspen cutting to water's edge shows spring use of bark. 4th dam formed along where some l'pole fell. Which comes first, the dam or the fallen l'poles? Some kind of fish darted under cover of sunken log in about 5' ^{v. quiet} of water.

Sitting heavy behind dams.

^{40 yds.} Below 5th dam there is a gap of very few aspen but below this gap is a thick grove of aspen, some being 10" dbh & this may be a good reserve food supply. Signs of last winter's use here. Pounding heard below colony aspen & especially willow are extremely dense, but little if any beaver use.

A large meadow below this with almost no aspen but suddenly abundant just below meadow where a broken-down shack is on W. bank. Some scanty signs of use 50 yds farther down, old & new 1-2". 50 yds farther a winter-topped tree & a white fir cut down by beaver! Fairly fresh sign increasing, maybe another colony near. Lots of cutting on east bank near old Jeffrey snag; some 40 yds from water. Small dam, near which couple

Confirmed
1958
by
Taylor

J. G. Hall
1952

July 2 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif
more firs are cut & even a small
lodgepole. Never seen positive evidence
of conifer-use before this. 2 more
small dams & more cutting. Seems to
be a v. large colony. Sapsucker flew
to dead pine snag just above a large
dam, the largest of any seen so far
in any of the other colonies. First
impression is that this isn't a very
old colony although it is large. This was
based on fact that not many standing
drowned l'poles are visible compared to
rockslide colony. But on second thought,
there are a great many fallen trunks
which may have been drowned by
the pond a long time ago, thus the
pond may be older than rockslide
one. Probably the case. Good deal of
sprouting which shows on only a
couple of stumps I checked, growth
starting 1951. Have to check more. Dam
really tremendous. Don't see any lodge
but don't have time for thorough look this
time. Abundant fresh aspen cutting on west
bank. Lots of willow below main dam.
Another fair-sized dam 70 yds up from main
dam. Left 5 PM. Weather clear & hot all day

J. G. Hall
1952

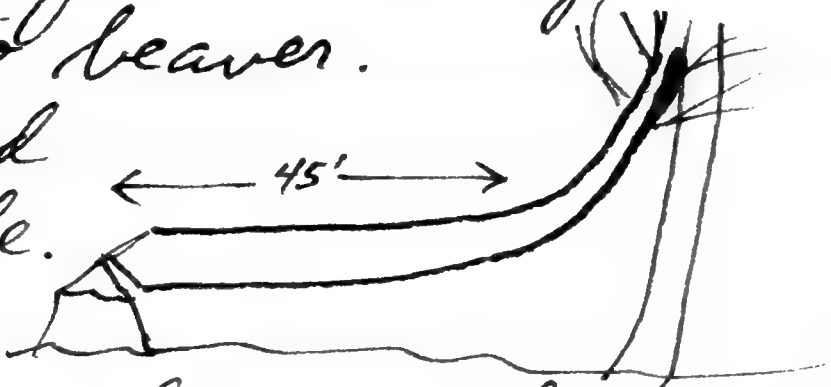
19

July 4 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

12:15 PM. Followed path past roadside colony down to large colony found July 2. Some 10 & 11" aspens below the main dam. Well-worn path from stream below dam to 12" aspen felled roughly parallel to creek & 10' from it. Upper part lodged in another aspen but main trunk still parallel to ground & thus available to beaver.

Bark stripped from lower side.

Sapoucker's



nest hole in stream-side aspen 12' from ground. Several large aspen, one 14-15" diam, have beaver tooth marks about 18" from ground. Will check to see if these trees are ever cut. Impression of youngness of pond again confirmed by presence of many impounded pines which would have been dead by now if the colony had been long established. Some show signs of dying. Great stand of dead lodgepoles about 500 yds. below this colony which made me suspect another colony but no colony or sign of one could be found.

J. G. Hall
1952

July 4 Sagehen Creek, 3 mi NW Hobart Mills, Nevada Co, Calif.
Don't know what killed these trees. Walked down farther past fence line into meadow full of herfords to see what a white semicircle is that shows up on the aerial photo. It turned out to be an old R.R. bed. Ever ranch bldgs visible beyond. Land very open & swampy or meadow-like & obviously not fit for C. canaliculatus. Didn't accomplish much this trip other than scouting down stream to Ever Ranch & locating the ^{site of the} lower dam on the aerial photo. Wish there were some photos of less than 13 years age. Weather calm & clear all day. Got back to car 4:30 PM.

July 6 Rockslide colony 8:30 PM. Went along Glenn who was fishing in pond by lodge. He caught 3 browns & a brook on mayfly nymphs. Caddis of mayflies hovering about. Saw beaver after hearing 3 "whacks" near same spot just below the dynamited dam. Sound just like a rock thrown into the water. The beaver I saw swam back & forth 50 yds or so down from us, evidently eyeing us carefully. Don't know if the 3 whacks were from one or 3 beavers. This was

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Sagehen Creek, 3mi NW Hobart Mills, Nevada Co, Calif

July 6 just before the full moon appeared and visibility was extremely poor.

July 7 Left 9:15 PM. Upper colony 11:30 AM.

Marked about 175 aspens showing beaver workings; guess this to be perhaps a little less than half. 2", 3", 1", 4", 5", 6", 7", 8", 12", 9", 11" & 1" commonest in that order so far. Will continue tomorrow. Alder a substantial food item here in contrast to situation in the other colonies.

Will have to devise some sampling method to work on them & perhaps willow as they are too numerous to treat as completely as aspen. Left

July 8 4 PM. Upper colony 10:30 AM. Continued marking used trees until 2:15 and must have 90% of them. Totals marked up to this time tabulated below:

Diam (1' from π)	Felled X or -	Girdled ^ Partly	Girdled completely X but standing	lodged L
< 1"	2			
1	54			
2	120	2		
3	71	4		
4	31	4	1	
5	16	2		

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July 8 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

6	12	2	2	1
7	7	3	1	
8	9	2	3	1
9	7	2	1	
10	3			1
11	4	4		
12	3	1	1	1
16	1			

July 9 Lowermost colony. 2:15 PM. Attempted to map this colony by plane-table baseline method but willows & other cover is so dense that we couldn't see enough points across dam to tie in with. This method probably would still work for mapping one shore at a time but traversing would be better I think. Jim already has a sketch map he drew a couple of days ago. Left

July 10 6 PM. Uppermost colony, 10:30 AM. Betty & I ~~but~~ marked most of the unused aspen in general zone of used aspen on N side of pond. Wondered for a long time whether to include all trees within a certain distance, say 30' of shore or only those in general zone of use which varies greatly from place to place. In one area, they have gone 40 or 50' from shore to cut small

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Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

- July 11 aspen, ignoring large trees growing on water's edge. In other places they cut large trees at water's edge. We decided to mark trees in general zone of use. As it's very difficult to determine the exact limits to the zones of use, this is a more or less arbitrary count but at least should give some indication of % of use of various diam. classes when completed. Marked about 430 trees. Weather hazy to cloudy bright & gentle breeze. Left 4:30 PM. Lowermost colony, 3 PM. Heckman & I mapped some of the important points by traversing using Brunton compass & steel tape. This goes much faster than the base-line plane table method, especially in brushy cover. Left 6:30 PM. Weather threatening lightning & thunder & a
- July 14 short shower. Upper Pond 10 AM. Saw lots of Picket pin ground squirrels on way up on Kilm Meadow. Spent most of day completing tabulation of unused aspen and adding some used we missed before. Following table lists unused trees by diameter categories with totals.

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July 14 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada
Co., Calif. Upper Pond.

Unused Aspen

Diam	No.		Total
	7/11	7/14	
< 1"	1	12	13
1"	36	79	115
2	94	144	238
3	85	121	206
4	61	61	122
5	44	34	78
6	46 27	17	44
7	11	8	19
8	8	8	16
9	10	8	18
10	14	8	22
11	16 11	5	21
12	7	3	10
13	5	4	9
14	7	2	9
15	4	1	5
16	2	1	3
17	2	1	3
18	1	1	2
			<u>953</u>

Found quail nest - 10 eggs under a spray of fir on an island near where main N-bound trib joins the creek. Mother flushed & sky-rocketed away. We left 4:30 PM. Sun-

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July 14 Sagehen Creek, 3 mi. N.W. Hobart Mills, Nevada Co., Calif.

my all ~~day~~^{AM} - little noticeable wind.
By mid-afternoon it began to cloud up
& was threatening to rain by 4:30.
Started to rain hard by 4:45.

July 15 Kilm Meadow 8:30 AM. Set up camera to try
to photograph Picket-pins by remote con-
trol. No luck. Walked over to the shack on
S side of meadow and found the Picket-
et-pins living in very moist situ-
ations in the grass, as well as in
the sagebrush on the dry N edge.
Lots of carnivore scats on the
open floor of the shack. My guess
is skunk, but will have to see. Left
by 11 AM. Lower colony. 2 PM. Got
a number of soft-bottom samples
with Jim to use in his paper. These
stations were in silt-bottom
areas just upstream from dam.
Had lots of trouble & dredge, etc.

Left 6:30 PM. Weather hot all
day. Upper colony ^{1:30 PM} ~~9:30 AM~~ Finished mark-
ing some used aspen in the center of the
colony and built an observation
platform in a lodgepole from which
a good view can be obtained of
most of the pond in vicinity of house.

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July 16 Sagehen Creek, 3 mi NW Hobart Mills, Nevada Co., Calif.

Table below is amended to show used trees up-to-date.

Used Aspens					Total T
Diam	cut X	Partly girdled ^	girdled X	Lodged L	
< 1"	2				2
1	55				55
2	135	2			137
3	82 83	13		+ 1	96
4	37	13	1		51
5	20	5			25
6	13 14	5	4	+ 1	23
7	11	6	1		18
8	9 10	3	3	+ 1	16
9	7 8	2	2		11
10	3 4			+ 1	4
11	4	4			8
12	3 4	1	2	+ 1	7
13		1			1
14					0
15		1			1
16	1				1
17					0
18					0
+ lodged tree tabulated under cut (X)					0
3827					56
					13
					+ 5
					456

Left 5:30. Returned + got stationed in tree platform 7:10. Calm + clear.
8:25. Pewee perched on snag, watching

July 16 Sagehen Creek, 3mi NW Hobart Mills, Nevada Co, Calif
for catching insects. Tilts + wags
head this way + that. When re-
turning, usually settles back
on same perch. Will go 40' to
catch an insect. 7:30 flew up to
settle on nest after feeding young
briefly. Nest on limb of 10" aspen
35' above ground + is just plas-
tered on a limb ^{to a small} side-
branch to form a supporting fork.
Nest shallow + smooth-appearing.
7:35 flew off nest, down to perch
+ more fly-catching. 7:40 back to nest.
7:45 large beaver first noticed
swimming downstream from
vicinity of winter-cut snag, but
lost sight of him about 15' up-
stream from house. Probably en-
tered it. Saw no more of him though
I watched carefully up + down-
stream. 8:25. Pewee down to fly-
catch again. Has 2 favorite perches
both dead snags overhanging
pond, about 5' above surface + 20'
apart. One is almost directly be-
low nest. Another pewee calling
off in trees to N. 8:30, back to

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July 16 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.
nest after feeding at least one
young. 9:00 getting hard to see.
9:10 so dark I can't see well.
Climbed down + just as I set
foot on the log, 2 or 3 whacks
about 2' away startled me.
A couple more whacks in
same place, then a couple
from S end of pond. Shined
flashlight but couldn't see
the beavers. All quiet so left
July 17 at 9:15 PM. 6:15 AM. back on observation
platform but no activity visible.
Left 7:15 AM and climbed knoll
just S of beaver pond. Mule's
ears on top + Ceanothus on sides.
Jumped a deer or two on way up
but didn't get any good views.
View of Sagehen Drainage from
top of this knoll is the best so
far. Bluebirds + a (olive-sided)
flycatcher. Green tailed towhee
on 10' pine in midst of Ceanothus.
Call was like junco's "ties" with
occasional cat bird-like meow.
Some kind of wren in same tree.
Plain brown above + below. Some

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July 17 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

cross-marks on dorsal tail sur-
^{Probably house}face. Crossed over to sister knoll
just to S. Separated by a
shallow saddle from first
knoll. Skirted around W edge
to return to first knoll & to
beaver pond. Left 9:25 AM.
Saw remains of deer carcass
which Bob, Phil & I saw on June
24. Seemed to be v. fresh then &
many organs intact, now only a
few skin remnants and a
lower foreleg. Clear & warm all AM.

July 18 Lower colony 9:45 AM. Small dam just
below main dam on SE shore shows
a lot of new work since yesterday
according to Jim Heikman. Path
from water's edge to 2" aspen
stumps still wet. Helped Jim
collect bottom sample from
pebbly bottom 50 yds above
main dam near SE shore. Left
11:30. Weather clear & hot. Rock-

July 21 Slide colony 10:30 A.M. Saw an 8" & a 9"
brown lurking in 3' water just in lee
of the big downed pole about which
house is constructed. Bottom here is

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July 21 Sagehen Creek, 3mi. NW Hobart Mills, Nevada Co., Calif.

silty and various organisms were crawling about. Spent most of morning ageing sprouts on cut aspen stumps proceeding E along N side of stream. Took "random" samples, looking especially for old, weathered stumps. Probably the oldest cuts were of stumps now in or near the water's edge. These don't sprout, however, and even those on damp ground between water & rockslide proper don't sprout as well as do those on the rockslide. So some of the stumps now surrounded by water probably were cut previous to the winter of 1947-8 which is the time of earliest cutting indicated by the 43 stumps I examined. Used nodding for dating.

No. stumps	1 st growing season
8	1948
17	1949
3	1950
5	1951
10	1952
<hr/> 43	

Although there is some evidence of recent cutting of large aspen far

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July 21 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.
back from shore on the W side of the
rocks, most of the stumps here are
'48-ers & '49-ers. As you go downstream
the recent ones are most abundant,
especially 1952. At least half of the
1952 cuts are deep-snow cuts! Couple
of 7-inchers darted upstream from
hard-bottom section of stream just
below main dam. Creeper now has a
nest under some loose bark of same
dead l'pole where we saw hairies feed-
ing young on June 27. Hairies have
now flown the coop. Probably he good idea to
map the bottom-types as well as rel. water
velocities when mapping these colonies.
Maybe just bottom type, tho, since this re-
flects stream flow. Many caddisfly-
larvae foraging on silt-bottom
of shallow, land-locked pools left by
receding water-level. Odd that beaver
ignore almost all the new sprouts.
The stumps producing the sprouts
would probably average $2\frac{1}{2}$ " in
diam. Maybe the beaver will ignore
the sprouts until they get this
thick. They must be just as nut-
ritious as older & thicker ones, but most


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July 21 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.


recent cutting seems to be willow of less than an inch diam. Saw 7" lizard, v. thin, about $\frac{1}{4}$ " diam, long tail, about $\frac{1}{2}$ T. length. legs very short but not as in *Batrachoseps*. In amongst the boulders of rockslide. Rather fast but catchable probably. Wonder if it could be producing the mysterious calcareous deposits on these rocks. Farther downstream near blaw-dam there were three 3-inches + one 8-inches in 4' of water where bottom was partially silted. Almost stumbled on another house before recognizing it as such. Roughly 250 yds below the upper house + just below blasted dam on S side. Top of house about 8' from water's edge. Entrance easily visible about 2' below surface. Left 3 PM. Returned + climbed dead pine 6:45 PM. This covers a broad sweep of stream above + below this "new" house. 7:35 mvt. of willows attracted my eye 30 yds down stream from the house + an adult beaver appeared at water's edge $\pm \frac{1}{2}$ " willow cutting, entered water, swam to opposite shore, dove + disappeared (into bank

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July 21 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.
 burrow?) Reappeared in 30 sec + repeated performance twice by 7:40. At 7:45 he appeared but was lost to sight down a N branch of the stream for a couple of minutes after which he returned to first willow clump, cut another branch & dove as before. Always dove in exactly same spot. There are no aspen within a reasonable distance from this house so it will be an interesting colony to study in contrast to the others. 8:05, reappeared, climbed up over small dam, swam 20' under, 20' above surface, then dove 30' downstream from house. When swimming on surface it looks something like this: 
 8:10 reappeared just off the house, swam lazily around N side of a little island & was lost to sight. 8:12 a doe appeared on N side of stream & crossed to S side, just up from blasted dam. 8:16 saw beaver on S end of blasted dam & freshly cut willow to which it entered water & was lost to

July 21 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

to sight. May have swum under water to main house. No more activity until 8:45 when I left. Betty + I walked downstream almost to water intake where she showed me where she'd watched a beaver cutting + eating willows. Sept 9 P.M. Weather clear all day.

July 22 Lower rockslide colony 6:40 P.M. Saw one adult + young of Mt. quail on roadside among manzanitas 200 yds above rockslide. Young dispersed + hid so I couldn't tell how many there were. Adult kept calling from about 15' away, evidently to keep young in hiding. Adult had 2 plumes or else a split one.  6:45 adult beaver with a willow cutting entered water from N. shore + began swimming upstream, lost to sight just below main pond. 6:55 one appeared in water 10' from S shore, cut willow, took it to shallow water in which it squatted, facing shore + ate it, leaves first and shoots, then bark from main

July 22 Sagehen Creek 3mi NW Hobart Mills, Nevada Co., Calif.
stem starting at small end
& working to large end while
holding stick & rotating it like
corn on the cob. Then swam up
toward small island, came back,
started to N shore where
first seen & again was lost to
sight at 7 P.M. 7:02-7:15 seen
obscurely working away on a
little isle near N shore. Once or
twice appeared to let old dead
sticks float down. Then swam
up to little cove just below small
dam where it was last night,
dove & disappeared. 7:20 caught
sight of it again working over in
N channel which is partially screened
from sight. Doing something to dead sticks.
7:25 thrashing about in willows. 7:28
dove from small cove (into bank burrow?).
7:35 heard beaver crunching on dead
stick near cove. 7:40 young doe came to
water's edge below where beaver was
working, drank, crossed to "gravel patch
island" & grazed not more than 25'
from beaver. Beaver cut & ate willows
in place, doe saw movement &

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July 22 Sagehen Creek 3 mi. NW Hobart Mills, Nevada Co., Calif.

started but then continued to feed. Two beaver visible, one in cove feeding on willows in water, the other feeding in next cove downstream. Doe heard something on N shore but continues to feed. 7:55 Two beaver nuzzle each other in burrow cove. Doe left while I wasn't looking. Beaver takes dead sticks and brush and dives with them. 7:57 takes more material & dives. Young beaver (yearling?) seen in main pond. Swims toward spit, then dives swimming underwater from little isle to spit, then on surface to lower island. Tail of this small beaver is on surface when it swims in contrast to that of adults. Young beaver began to cut willows on lower island. 8:06 adult still in cove below small dam, pulling dead roots & sticks from bank & taking them downstream. One adult came for another dead stick, another came to a feeding platform & cut some willows, bringing them into shallow water

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July 22 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., California

to eat. for 5 min. 8:18 had finished eating, so pulled some dead sticks from shore and took them downstream. Almost immediately another had taken his place to take off more dead sticks. 8:23 one "materialized" in the cove & fed on willows for 5 min., then took away dead material. 8:30 yling on spit, 8:35 adult appeared, cut willows in cove, bringing them to shallows before eating them. Cut more willows which it took downstream & it (8:40). I left at 8:45 as it was getting too dark to see. Weather clear & calm as usual.

July 23 Upper colony 3:50 PM. visited quail nest: all 10 eggs hatched. Upon seat 6:45 nothing till 8:35 when a yearling (?) appeared between house and dam, dove, surfaced & green stick which it nored into dam, then crawled over dam & disappeared. Reappeared a few seconds later & long cut willow which it carried back to dive into house with at 8:38. at 8:41 reappeared & went

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July 23 Sagehen Creek, 3mi. NW Hobart Mills, Nevada Co., Calif.

over dam again in same place.
8:50 reappeared & willow cutting
5' long and took it into house or
forced it into subsurface wall of
house. 9 PM one appeared in
pond above house, swam to shore
on surface, then underwater. Lost
sight of him. Left tree at 9. At 9:05
as I got to shore I saw a yling swim-
ming 20' away, shone light in his
face, at which he whacked & dove.
Few secs. later an adult swam towards
me so I shone light in his eyes.
He was indecisive, first swim-
ming towards me, then finally
away w/o alarm. Got to within 10'

July 24 of me once. Wyethia knob just S. of
upper colony 7 AM. Took photo of pond.
Scared quail; lots calling. Many fox
sparrow & chipmunks about. 3+ ♀ tan-
agers lit in tall A. conifer. Aud. warbler in
top of a giant w. fir. Many robins, some chick-
adees & a pewee. Up to Hoffmann's for breakfast.
White-breasted nuthatches at his bean-to.
Back at upper colony, noticed red-tail soar-
ing N. of the pond. Took photo of
lodged aspen which shows consider-

July 24 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co, Calif.
able additional cutting compared to when we first photographed about a month ago. 11:07 saw a water shrew swimming rapidly along under water about 2" from S shore just above main dam. He followed shore closely and made ripples occasionally as he hit the surf. In fact I thought it was a small fish "rising" at first. Surged until 1 PM, took 2 b/w & polaroid of house from seat. Stationed myself in seat 6:45 PM. All clear & calm & warmer than last night. Pewees hard at work catching insects & feeding young; raised big row when a robin perched on limb just below their nest. 8:35 beaver appeared & 3" aspen log, (peeled) and forced it into the dam, then disappeared over dam. 8:45 doe & twin spotted fawns ambled slowly downstream on N bank, feeding as they went. Left tree at 9 PM w/o seeing any more beavers. Stood on S bank for 20 minutes & scared a doe & at least one fawn (maybe same trio seen earlier on N bank). Peromyscus at my

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July 24 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

feet. Not any signs or sounds of beavers.

July 25 8:10 AM. Started around to look for new cuttings. a 10' dam just below main one shows evidence of recent work with leaved aspen + alder sticks worked into it. Ceanothus covered with black caterpillars eating the leaves. Crossed over to N shore at "little swamp" which is also used by dets. Another small dam on N side below main one is in good condn. but doesn't show evidence of recent work. 15' from shore just above this dam a 2" aspen has been recently cut & the trunk removed.

a number of other aspen of same size closer to shore untouched. Dam just above here (which probably is same one I examined on S side) is in excellent repair & signs of much recent work: mainly asp, some willow. 9" aspen 20' from the shore here shows work of last night or before with bark all peeled and wood still clean & wet. Just a few preliminary cuts into wood itself on uphill side. Ground

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Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

July 25

Trampled down between it and water. Climbed huge l'pole nearly affording good view of this area. One new 1-inch, three 2-inches and four 3-inches newly cut here since my paint-job. Took photo of nine-inch & left at 10:30 AM.

4:30 PM came back to newly-girdled 9-inch set up camera for remote control from big l'pole & left for Hoffmann. Returned 6:15 - weather overcast & threatening, climbed tree & waited till 9 PM for beaver to return to cutting. No swap. Left at 9 after resetting camera for flash-trap. Got photo of beaver sometime in the night.



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Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

Aug 1 Upper colony 3 PM. Many new sticks piled up at submerged edge of house since last visit (July 26).

"Photo" tree which is lodged has been cut further, now leaving only a $1\frac{1}{2}$ " core still supporting it. "Flash" tree has been cut into further. ^{weather threatening} Sept

Aug 2 3:30 PM, Arrived 3 PM at lower limit of study area on N shore. A 7" asp. cut & lodged 20 yds below flash tree. New work but representing at least 2 different sessions because of variations in freshness of chips. Flash tree shows no additional work. A good deal of new cutting near "symmetrical" pole next to shore; short branches trimmed from felled trees. Marked trees worked on since last marking

Session:

Sept 4:30 PM

Diam:	X	^	L	X
1"	I			
2"	II			
3"	II	I		
4"	III		I	
5"	I			
7"	I		I	

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Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co, Calif.

Aug 2 Lower Rockslide colony 6:40 PM. Clear + calm. A couple of aspen sections + leaves still on visible lying on bottom between ends of blasted dam; they may have floated down from above. Townsends' solitaire on "garbage road" on way down to camp). A 6" dead pine has fallen across the pond just below the ends of the blasted dam, from N shore. 7:02 PM med. size beaver appeared at lower dam, swam leisurely up, dove opposite house at 7:05. At 7:10 same (?) animal appeared at shore of little island opp. house, went ashore, cut v. small willow twig which it brought back to eat while squatting in water. Then swam a couple of feet towards house + dove (7:13). 7:19-7:30 fed on willow sprigs in a little cove on S. side, then swam up to the spit + dove. 7:36 beaver-caused ripples on fork W of blasted dam. 7:42 beaver seen swimming downstream underwater from spit to cove opposite me. Just before it surfaced it stirred a cloud of mud up from bottom + as it came up its forepaws were clenched

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Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co, Calif.

Aug 2 and held next to its breast but I couldn't tell whether it carried mud or not. Floated at cove for several seconds, then dove and swam up to upper cove where it fed for so long previously but this time left after nosing about for a second. Then it swam across and around island to a trampled path going up onto the N shore. Made a no. of false starts onto the land but reentered the water swam rest of the way around island & came around to its feeding spot on S side of island where it squatted & fed on willows till 8:02. Then dove & did something on bottom for several seconds, surfaced, swam over to dead willow clump, got stick & swam \pm it way downstream & must have put it in lower dam. It then swam up to, entered & left the cove nearest me, then across & crawled over to trib cove where they were the first night (8:08). Saw ripples from time to time but no beavers in this lower N fork. 8:26 beaver went upstream, lots

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Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co, Calif.

Aug 2 of ripples but view blocked. There is no one place where a person can see more than $\frac{2}{3}$ of any of the colonies I've seen so far. 8:35 beaver appeared opposite small dam, swam upstream & dove just below spit. Left at 8:36, clear


Aug 3 & calm. 7:05 PM same colony. Fisherman left as I arrived. 7:20 beaver in cove below little dam; swam & floated then fed (?). Activity ended 7:25. 7:30 more activity in the N fork, one coming over to main pond, diving, then floating idly before swimming up to beyond spit underwater & entered house presumably. Always seem to see beavers first in eve. at vicinity of N fork cove where they were the first night. May have burrow just below this spot. 7:38 one reappeared, swam down, then up about $\frac{1}{2}$ way up, another came over from fork & swam upstream, both dove under deadfall. A third, noticed squatting way down on fork. This makes 3 med size to adults seen at one time.

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Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co, Calif.

Aug 3 7:45 one swam down & up, entered cove above mine, crawled out on land, cut willow switch & returned to squat in shallows to eat.

Tail marked:  Other one way down fork still squatting in shallow water but gone by 7:50. The second one left by 7:55. 8:05 one in cove combing or scratching & left hind foot for about a minute, then cont. to feed, left at 8:07, next seen ~~8:09~~ underwater on channel N of isle.

8:09 one floating near house, then swam down below spit & dove. It or another appeared from channel, swam up & dove below spit.

One floating by house, swam toward S shore & was lost till it thrashed in willows 10' ^{from} ~~off~~ shore. 8:13 it reappeared at same spot & switch, swam & it to house & dove; this was a big beaver. As Betty arrived at 8:15 a smaller one left island & dove quietly. Several seconds later I just missed seeing one go over the usual xing "gap" to N fork.

Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co, Calif.

- Aug 3 8:18 med. size beaver swam from way down fork, part way up but was lost in a cove. 8:19 more beaver ripples farther up cove but couldn't see the beaver. 8:22 one swam underwater in main pond. Left 8:30 PM.
- Aug 4 Main stream about half way between main camp & Rockslide colonies, just opposite the upper limit of the bare area of the N hillslope. 1:50 PM. On S side some old aspen cuttings & some of this last winter judging by sprouts. Beaver house (?) by large fallen log. Lots of last winter's cuttings on S side of U. Rockslide colony. L. Rockslide colony 2:30 PM. 1' aspen log freshly peeled & lying on bottom at entrance to house. Bottom by at entrance so muddy we thought beavers must have been just entering so we climbed tree to watch until 2:55. No action so we came down & triangulated Brunton. Down in lower end of

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Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co, Calif.

Aug 4

fork is a bigger dam than any of the others + just above it is what looks like a submerged entrance to a bank burrow, but entrance is on bottom of pond, not in the bank itself. Left 4 PM.

Aug 5

6:40 PM J. ^W Allen in original observation tree + I was in a tree on "gravel patch" island; this way we could cover entire area. Following account is a composite of both our notes.
6:53 beaver appeared from cove on N side of fork, swam 10' upstream, climbed out on the bank to cut a small willow switch, took it farther up under water + disappeared into bank burrow (?) at 6:54. System of bank burrows must be extensive. 6:58 a rather small beaver appeared from the "burrow" where the ^{beavers were seen} ~~last one~~ ^{entering + leaving, 1st night,} ~~disappeared~~, came ashore, cut willow + took it with him into burrow where the 1st beaver had disappeared. 7:13 This beaver (or one of the same size) emerged from this burrow + crossed over to main pond. You can tell when one's going to leave burrow or just

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Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co, Calif.

Aug 5 after he's left burrow & is about to surface by the doming of the water surface. after crossing to main pond, beaver swam up to the island, dove & surfaced in front of house, climbed out onto house where he gnawed on willow switch for 2 minutes. Next he swam across to "leaner" tree, cut more willow, brought it back to S end of blasted dam, "lost" it here so climbed up on land at 7:24 to cut more willow which he took with him to water, swam downstream to crossing, crossed over into N fork, & dove ^{7:27} & willow into one the burrow he left earlier. also at 7:27 a doe & twin spotted fawns appeared on main S shore but stayed 5 minutes before leaving. 7:30 one at S end blasted dam, larger than one just observed. 7:39 beaver stirring up bottom at twin tree burrow, finally surfacing & crosses to main pond at 7:40. Swam upstream, turned in at the channel N of island, turned around

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Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

Aug 5 and swam back downstream to the "little red" pine, turns around & swims back up again to cove nearest the obs. tree where it got out. Meanwhile another beaver was noticed sitting in water at the small dam above the "xing". Beaver at cove was now feeding on willow (7:46) first while squatting in water, then on land. After 2 minutes he swam upstream to S end of blasted dam where he cut & ate some willow, then cut more willow, diving & it into house at 7:53.

at 7:46 one swam up N channel & dove & some veg. in his mouth, at 7:48 another repeats the performance but w/o food. 7:50 one appears at path to N shore in channel, swims up & dives where the other 2 did. In next 5 min., 4 others repeat the act. They may be diving to get under an kind of brushfall obstruction blocking the channel or else to enter a burrow on the N shore or both.

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Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

Aug 5 at 7:56 a beaver came out from W end of N channel, circled around to S side of the island where it went ashore & fed on willows until 8:12 a small beaver, smallest seen all evening emerged from N bank burrow, rested a few seconds - only his head showing from under cover of the tall grass that overhangs shore, then swam up to the small dam crossing over to main pond via it rather than by the usual "xing". He then swam up to N end of dam, & back down to a cove on the S shore, finally returning again to N channel. 8:17 one goes up N channel, dives toward bank & not to pass under obstruction. 8:18 beaver seen swimming up N channel & around obstruction; lost him. 8:26 beaver swims down N channel, then over into main pond. Left 8:30. Weather calm, clear at first, clouding over by time

Aug 7 we left. Upper colony 12 noon - Jim Allen. Sheep have been through here this AM

Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

- Aug 7. and really trampled & chewed the place. a partly girdled tree above main lodge has been felled. This is area where there were new workings several days ago; site appears the same otherwise. a 6" tree very freshly girdled near flash tree. Surveyed till 4 PM with Jim. at 6:05 PM we both took up stations, Jim in seat, I in flash tree. No activity noted except for a chickaree crossing the pond on fallen logs.
- Aug 8 at 6:43. Both left 8:15 PM. Surveyed rest of vicinity of colony for most of rest of day. Jim & I switched observation posts for this evening. Jim in flash tree, I in seat at 6:10 PM. 6:16 chickaree with 1 pole cone in mouth, crossed pond from N to S. 6:58 a chickaree crossed N corner of pond on log, paused to drink and continued along N shore. 7:44 water shrew ran rapidly along shore from N corner of pond toward house. Halfway there it entered shallow water, swam rapidly near shore, crawled ashore & ducked into crevice in house. Fish jumping but no beavers. Left 8:30.
- Aug 9 In seat 6:08 AM. Pewees calling. 6:50 saw

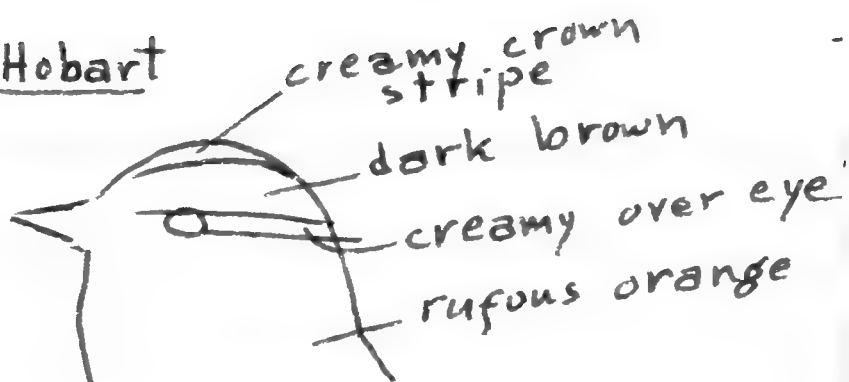
Sagehen Creek, 3 mi. NW Hobart
Mills, Nevada Co., Calif.

Aug 9 a bird in alders



rufous

buff



creamy crown
stripe

dark brown

creamy over eye

rufous orange

Probably(?) ♀ black-headed
grooveback. B. Hoffmann has re-
cently seen them (♀'s only). 6:55 pewees
active, one went to nest but I couldn't
see what it did. 7:03 two mt. chickadees
and another bird (vireo or warbler) lit
in my tree. Chickadees came v. close,
perching 2' from my head. The other bird
not so close, gave 'chip or tsip' note. yel-
low head fading into gray belly. Upper
part of head somewhat darker but not
black. Upper parts dark brown although
I got poor view of them. No eye markings.
♀ pileolated warbler possibly. 7:11 slim
olive green-yellow bird (♀ tanager?) lit in
aspen. 2 prominent wing-bars. No beaver ac-
tivity. Moon still high in sky (45°) when I

Aug 11 left at 7:16. 100 yards downstream from
the little rockslide opposite our camp,
11:30 AM. Scared a thrush off her nest in
an 8' white fir. Nest 4½ feet above ground
and contained 2 young and a blue-
green egg. This area is white fir under-
story, lodge pine overstory.

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Aug 12 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co, Calif.
~~Aug 11~~ 11:30 Scared the ♀ from nest again. Last
egg hatched and 3 yung in nest.

Aug 13 Kiln Meadow 10 AM. Picket pins very fat,
mistook them for young marmots.
Upper Colony 10:55. Many 1½" fingerlings
in quiet, silt-covered shallows. 1:50, 8-9"
rb swam under "scum" near house where
H. Flittner saw one before. 5 min later 7"
brookie swam down & under scum. 5" brook-
ies here & there. Some new looking aspen
sticks, ^{2 forked on} stored near entrance to house on
bottom. A 9 inch aspen just recently
~~not~~ worked on (See Aug 7 "6-inch" ??) has
been cut through but lodged. I dislodged
it with much difficulty and will now see
if the beaver will use it. Surveyed in
some more details till 4:30, then left.

Lower Rockslide colony 6:25 PM. In
obs. tree #1. 6:30 med. size beaver appeared
at crossing, swam up entire pond under-
water & I lost sight of him. 6:32 yearling
swam from crossing to small cove opposite,
floated & dove. 6:35 some commotion (cut-
ting near "little red"; maybe the year-
ling. 6:40 after "upwelling", surface of
N. channel broken by a beaver which
probably had emerged from a bank

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Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

Aug 13 burrow. Lost sight of it up channel.

Commotion a small dam near crossing. 6:45 yearling moved from cove to lower dam, back to spit & from there to house under water, emerged by house, cut willow ^{medium size} & dove into house. 6:50 ¹, one sighted swimming under water from spit to N channel. Emerged at channel path, cut & fed on a willow in shallows. 6:54 yearling seen by house, swam down, then back to island, finally cut willow at S. dam. Meanwhile med. size beaver had swum past it & over to one of the S coves & come ashore to cut willows 20' from shore. This beaver is "scar-tail". At 7:00 it took cutting to cove swam & dove with it at the spit. 7:13 a medium-size beaver seen at grassy bank of the north fork, swimming down a round bend with dead sticks. 7:16 up to 1st night cove to cut & eat in shallows. 7:18 ripples by burrow, 7:20 a beaver crossed over at crossing, dove near spit to reappear at the crossing and dove to appear at spit, then dove to appear at gravel island. 7:23 first beaver (at 1st night cove) swims down fork & disappears. Now both are lost to view.

Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

Aug 13 7:25 "living" beaver now reappears from gravel island & large cutting which he took over crossing, into n. channel & apparently dove into burrow with it.

7:28 one appeared in fork, almost crossed, but dove and at 7:30 was eating willow just N of crossing but had only his head & neck above surface (unusual posture). 7:35, it dove & probably the same one swam down fork, then up almost to dam floated for a few seconds, moved down to mud shelf & dove. 7:45 one animal seen just N of crossing, feeding on cutting left by "diver". 7:49 another seen just above mud shelf, swim upstream, diving under a small stick after trying feebly to push it aside with his nose. Beaver still at crossing which crosses into main pond at 7:52, enters channel & is lost. 7:52 one goes underwater from house upstream.

7:55 one seen in channel going to path where it sits briefly in shallows but goes back & dives in channel. I left 7:57, returned 8:12 during which commotion one beaver fed in a S cove while another dove near this cove as I was climbing back up. 8:15 an-

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Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

Aug 13 other swam to spit cove, cut a willow which it took to shallows to eat. Meanwhile still another dove near the spit and "bub-bled" near the house. 8:19 one animal in SE cove swims up to SW cove to join the beaver already there but only noses a willow cutting. 7:20 a bit emerges from the house into this same cove, takes cutting from the first beaver & dives with it into house. The "robbed" beaver goes & dives to house. 7:21 the remaining one does same. 7:23 a med. size animal swims from spit to littered then to a S cove, up on land & back to water. Meanwhile another beaver somehow has gotten way back in the willows even, farther from shore than my tree. It dragged a cutting to shore & dove with it. 8:25 it is getting to be too dark to see so I leave just as the activity seems to be getting really underway - as usual.

Aug 14 Lower Rockslide colony 6:25 PM 6:32, two beavers swimming back & forth in north fork, one whacked tail twice, w/o diving & w/o a cause apparent to me. 6:35, one crossed over to pond,

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Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

Aug 14 swam very slowly up to house, floated down to spit cove, looked as if it would do some cutting but swam back out to spit and dove. 6:44 medium size beaver in N. channel swam around island then back to path and finally down stream to corner between crossing & the channel dam where he sat in shallows eating. 6:48, ^{a small one} went up channel again to NE shore to cut more willow. 6:49 went up channel apparently without cutting any more. 6:55 a beaver (same one?) in channel, went down to path, then down to shore to cut a switch which it carried to channel dam to eat in shallows. 6:58 it finished, swam across to bridge cove but dove & disappeared just before reaching it. Rippler at little red probably due to cutting by this beaver. Sun set 7:00 PM & a small one arrived at bridge cove where it ~~landed~~ ^{stopped} to feed in place. 7:02 it cut one ^{willow} on land & took it to shallows to eat. 7:05 beaver seen going up "mag cove" of N fork. Went ashore to cut, returned to stream & swam to mud shelf where it cruised back & forth. Meanwhile,

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Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

Aug 14 a med. size beaver approached crossing swam to S shore, onto shore where it cut a switch. It took this all the way back over the crossing with it. 7:08 beaver cutting on snag island, then went up to burrow where I lost him. 7:12 commotion on snag isl. shore. 7:13 two beavers seen to be working in vicinity of snag island. 7:14 one swims out to 1st night cove, then back out to dive near twin burrow. 7:38. One goes up N fork, over N fork dam & dives into N bank burrow. 7:40 goes over crossing, up to spit where it dives into house. 7:52, one in N fork goes to snag island & dives. 7:54 reappears, floats, goes up to 1st night cove, crossing, spit, back to bridge cove where it goes ashore to cut & eat in typical squatting position in shallow. 7:55 another one seen working at edge of spit. 7:58 cutting heard on snag island. 8:02 a beaver swims under-water up to blasted dam where it is seen 3 min. later cutting a spring which it takes into the house.

Bridge cove animal (now seen to be scar-tail) gets back on land, then goes up

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Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., California

Aug 14 to blasted dam at 8:09, turns around to a point just W of house where he goes ashore, cuts switch & returns to eat it in shallows at end of dam deadfall. 8:14 kit appears from house & tries to take whole cutting from scar-tail, but failing in this, cuts some of it off & dives with prize back into house. Meanwhile a beaver is swimming up N channel. Commotion in N fork, then cutting on channel island (at least 4 beavers accounted for? 3 adults visible or audible & 1 kit in house). 8:18 one swims up N. channel then another joins it both from channel dam. Scar-tail still in situ & kit in house, this definitely makes at least 4. I left at 8:20. Just as was the case yesterday, activity seems to begin in earnest just when it gets too dark to see. Activity before dark seems lackadaisical and random.

Aug 16 Upper colony 10:15 AM. Tree I dislodged on Aug. 13 has been trimmed in several places and severed in one spot 10' from top. Flash tree also shows work. A couple of new willow logs

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Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

- Aug 16 on house. Took shot of food store + of Jim in aspens. Left 10:35 AM.
- Aug 17 Lower Rockslide colony 6:22 PM. Met party of 5 fishermen one of whom had a nice 8" rt caught above "upper dam" which I suppose is what I call upper rockslide. They wandered on by 6:35.
- 6:47 a beaver appeared in N fork swam to dam on which it rested, then went on over dam + down almost to gravel island before I lost sight of it. 6:50 one in 1st right cove, went over dam + swam slowly down fork out of sight. Heard a kingfisher rattle 6:55 but didn't see anything. 6:56 small Cooper's or large sharpshin flew to lower observation snag, paused then came straight for my tree, veering off just before landing and circling it before sailing off downstream. Upper tail surface barred crosswise, underparts whitish with no rusty coloration. Sunset 6:58.
- 7:01 a beaver swam up fork to dam but I lost him. Fish rising by little red.
- 7:05 ^{big} one seen on snag island cutting

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Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

Aug 17 and takes cuttings to water's edge but is out of sight. Hear cutting noises. 7:09, swims up channel between the 2 islands (gravel + snag) + stands high up on hind legs to grasp willows overhanging the stream, cuts some + squats in shallow to eat. Violent ripples at twin pines but no beaver. 7:12 The large beaver finishes eating, goes farther up channel, grubs around at the shore, leans up to cut another switch + swims with it back to original feeding site. 7:15 he goes back to W. fork + his willow + pauses at corner of snag isl., then continues up stream at 7:15, crosses dam, crosses into main pond. at house he goes ashore but pauses suspiciously 5 feet from the water before going farther ashore. 7:18 another beaver at 1st night cove, "whacks" water + dives for no apparent reason (scent of fishermen?). Meanwhile the other beaver returns to shore + cutting + dives with it. 7:20 a beaver seen going down-pond, ^{from twin pines} and goes over the

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Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co, Calif.

Aug 17 dam and another one is cutting just below channel dam. First one gets down to mud shelf & disappears; now both are out of sight.

7:24 one appears at spit, goes down to bridge cove and cuts short sticks with which it returns to spit & dives. I assume all animals appearing & disappearing at the spit have come from or gone to the lodge. 7:26 a yearling (?) appears at deadfall, swims to shore, then turns around and goes up canal at end of deadfall, cuts & takes cutting to feeding spot near dead fall used the other night.

7:29 kit appears from house, swims to where other beaver is feeding & seems to be working at its cutting. 7:30 larger one goes back up canal leaving kit by deadfall. 7:32 large one lands just W of house & cuts willow, kit follows immediately and swims near shore but doesn't land. (Ripples & willow movement at corner of snag island). Big one is now eating on land and the kit joins it, gets a mouthful which it takes to eat in

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Sagehen Creek, 3 mi. NW. Hobart Mills, Nevada Co., Calif.
 Aug 17 shallows. 7:34 big one (scartail I think) goes farther ashore to cut. 7:35 returns = cutting with which it dives into house and is immediately followed by kit. One cutting on NE side of snag isl. also 7:35. 7:36 kit comes from house & goes to feeding spot where he cuts a willow while standing on tiptoes, eats same in shallows. Kits don't venture as far from water as do yearlings & adults. Beaver at snag isl also feeding. 7:38 a large one appears near twin pines, crosses swims up to spit, dives, surfaces, floats, then dives into house. 7:40 kit cutting some more. Snag isl beaver splashing around in shallows. 7:42 one appears from house to dive & disappear under deadfall. Meanwhile kit has gone. 7:43 one in N. fork (snag islander?). 7:45 one appears at little red and goes up to dive at spit. Another appears from channel dam & does same. Kit goes from house to feeding area near deadfall. Another beaver goes from channel dam to the channel, still another (?) goes from the

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Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

Aug 17 channel dam over to the left. I'm not sure just how many beaver are active right now as they never are all in sight at the same time. 7:47 one beaver in the N channel is now just floating, then goes up channel & dives (into burrow). A large beaver goes ashore near house and returns with cuttings to shallows. The left takes these cuttings, diving into the house with them and is immediately followed by the big one. 7:48 one animal at channel dam reaches out of water to cut but then goes on up channel & disappears without cutting. 7:50 all quiet. 7:51 one surfaces at channel dam, goes across to island to dive & reappear at dam before crossing again & diving. 7:53 beaver swims under water to dam from spit & then up channel. Another appears from nowhere, floats up channel & dives. Then one comes back down channel to dam and crosses to the island and one appears at the channel path. Neither does anything for a few seconds, then the first one dives and the second one does also.

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Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., California

Aug 17 One reappears immediately at the path then swims downstream and stops. 7:56 one beaver appears at spit, goes down to bridge cove while another appears below little red and swims up to spit & beyond. The one from the path goes down to the channel dam. The one at bridge cove swims up to dive at spit. Now one from the house goes to the deadfall and one is heard working at path. Meanwhile the one at the deadfall just floats there. 7:59 one appears at spit, then dives and the floater also goes back to the house & dives. The beaver at the path is floating while another beaver appearing at spit goes down & dives opposite bridge cove, surfaces at little red, swims down toward main dam, dives again, surfacing just above the main dam. 8:01 a beaver seen at path, taking to the water, another one at spit goes down to little red but turns to swim back upstream as does the beaver that was down by the main dam. This one dives below spit. 8:03 Beaver seen at W side of deadfall; it swims up between ends of blasted

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Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

Aug 17

dam + is lost to sight. At the same time 2 appear from the house, one goes ashore to cut near the house, the other does likewise on S dam end and a kit and a large beaver appear at the house (4 animals in sight at once). The large one goes ashore + the kit swims back and forth near shore.

8:08 two large and one other beaver are in the water and another appears to dive in the house while another climbs on top of the house to cut. Still another one is now (8:09) feeding by the dead-fall. I have no idea of how many beavers are active now but it is almost surely more than 4. At times the evening's activity of this colony appears to start in the N. fork and gradually work up to the vicinity of the house. 8:10 one enters water with cutting and dives. Another almost surfaces but redives. 8:12 one ~~surf~~ floats + then dives at dead-fall near island. 8:13 all quiet. 8:14 one swims into the small fork W of the blasted dam. This happens extremely seldom. 8:15 he swims from

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Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

Aug 17 The tributary fork back to main stream where he dives. 8:18 a commotion at end of the deadfall, then one swims from there to the house and dries. I left at 8:19.

Aug 18 Sheepherders camp in the meadow below Needham's cabin to the lower rockslide colony, started 10:15 AM. 10:30 scared doe and 2 fawns from heavy stream-side willow thicket. Doe first plunged into the water, then followed fawns up the S bank into pines. Reached upper rockslide colony by 10:50. Did not see the two 8-inchers by the house. Arrived at lower colony 11:15. Entrance to house as well as canal W of house muddy as if there'd been some recent daytime activity. I surveyed till 2:45 PM. I noticed scats lying on bottom of pond in

Aug 24. several places. Upper colony 1:25 PM The tree I dislodged Aug. 13 has been sectioned in several places and the top part has been carried away. 4 or 5 new aspen logs near house may have come from this. Mapped distribution of aspen on S side till 5. At 6 I was in the

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Aug 24 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.
seat. Air clear but windy. 6:10 a handsome long-tailed weasel crossed the pond from the house to S side via the logs. 30 seconds later a chickaree started out on logs to cross same way but turned back after going a foot or so. 6:20 fish jumping. 6:55 a large hawk (goshawk?) flew S just W of pond. Sunset 6:58. 7:18 a beaver appeared in floating debris near the house, raising his head up through the debris to dive toward house. 7:28 a small animal, probably a water shrew, zipped along the S edge of the house and into a hole in side of house. I didn't get a good look at it. 7:30 medium size beaver surfaced at willow clump just above dam, cut switch & dove into house. 7:48 a kit appeared at the same spot as the other one had, cut 3 switches & dove into the house. It seems to swim under water more than the adults. 7:48 small commotions and chitterings by a log float (water shrews?). 8:10 kit reappeared at willows, swam to log at base of seat tree,

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Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., California

- Aug 24 and then went back to the willows.
- Aug 25 I left at 8:12. Started surveying
7:30 AM. 9:10 dull clouded And. warbler
just N of road in aspens & pines. Some
new cutting on the rocky slope near
sta. 24 and lots of new cutting on
a very large aspen near sta. 23. This
had been at least partially girdled
before. Started for upper colony 10:45 AM
- Aug 30 weather warm & light breeze. Juncos
abundant in pines and seem to be
flocking. Several bluebirds among
l poles in hill meadow. Picket pins
abundant on meadow but don't sit up
or call as much as they did earlier
in the season, just run for burrows
when alarmed. Got to upper colony
11:30. Tree near sta. 23 shows no more
work. Surveyed till 3:20. Another area
of fresh cuttings found near sta. 25.
2 dislodged two trees. More fresh cutting
below where I dislodged that first tree
which has been cut up & completely re-
moved except for basal 10'. a good
many new slides worked into lower
dam. Lots of mud (some still wet)
plastered on W side of house. By the

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Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif

Aug 30 time I left at 4:10 the weather clear & slight breeze. Table of marking

diam	X	Λ	X	L
1				
2				
3				
4	·	·		
5	·			
6	·			
7	·			
8	·			

Aug 31 9:50 AM climbed the sharp knob just NE of Highway 89 where it crosses Sagehen. This knob is fairly steep but view from top commands most of Sagehen drainage. Bearing from top to grove of trees on gravel slide N of Hoffmann's lease to is 277° but rocks are magnetic. Fox sparrows in Ceanothus, others also. Arrived Lower Colony 10:40. Much new cutting at small ponds W of main pond & on other side below main pond & above it. Surveyed till 12:50 for Heckman. Weather hazy. Flushed 8-10 quail just below road pond.

Sept 2 Lower rockslide Colony 6:05 PM. Kingfisher perched in a snag up from S end of blasted dam, then rattled & flew downstream. I sat in twin pines. 6:20 Kingfisher lit in top of "Joe's Obs"; rattled up to beyond

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Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

Sept. 2. N. dam to at same time an immature redtail (?) flew down to land in a dead pine below. Head + neck dark brown, chest v. light cream, belly darker. 6:32 medium size beaver appeared at crossing, swam down to and over the lowest dam. 6:42 a big one under water about to enter twin pines burrow but then went up almost to little dam under water before I lost him. This one plus one ~~on~~ ~~the~~ others appeared just above sta. 4 dam & climbed over. Both fairly big but one bigger. Next swam down to & over the big dam, one nuzzled the other as they swam. This is the only evidence I've seen so far that one beaver any more than silently tolerates any other. Climbed down tree 7:45 + stood on bank for 15 minutes but saw no action so left 8:25. Walked up + down stream but saw nothing. Moon full.

Sept 3 While standing on S. dam at 12:10 surveying, I noticed a commotion in the water 20' upstream. The commotion approached + materialized into a group of ^{four} $\frac{2}{3}$ grown weirs, total

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Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co, Calif.

Sept 3

length 13"-14". They made their way down stream alternately swimming and exploring under roots and logs by the stream side. The stream definitely appeared to be their main avenue of approach, yet they did not restrict themselves to it. One mink swam over to the N dam while the other 3 were near a root up from S dam. This one then swam back across to the other 3, using a vigorous dug-paddle. They made sparrow-like calls often and went hurrying & scurrying up over the remains of S dam, paying absolutely no attention to me as far as I could tell. I was about 15' away from them most of the time.

6:30 PM Arrived with camera and had it set up for remote control photo of beaver by 7:28. I sat in twin pines with a switch. Betty sitting on bank above mud shelf. By 7:28 a big one was seen floating at mud shelf, eyeing Betty. After several seconds it dove silently. 7:50 some animal, apparently, floating in same

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Sagehen Creek, 3 mi. NW Hubart Mills, Nevada Co, Calif.

Sept 3

place, again eyeing Betty suspiciously and finally began swimming slowly up to dam at which camera was aimed. When beaver was just crossing dam I pushed the switch and the shutter clicked but no flash! Beaver instantly stopped tail & dived into a bank burrow about 5' upstream from the dam. Left 7:55.

Sept 4

Arrived in twin pines at 5:30 PM after resetting camera as it was last night. Weather clear but windy. 6:20 medium size beaver emerged from cove burrow where the one last night had gone after I fired the shutter. It headed toward the small dam immediately downstream but instead of crossing it, it swam suspiciously back and forth, perhaps wary of the camera & tripod. 6:23 it turned around, dove, swam under water to vicinity of the channel dam where I lost it. It probably entered a burrow there. 6:30 sunset. 6:40 a very large beaver appeared floating by mud

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Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

Sept 4 shelf where one was last night. Floated suspiciously for 5 minutes, gradually working upstream before it finally got up enough courage to climb over the small dam at which camera was aimed. I pressed the switch, firing both camera and flash this time, when the beaver was in a good position. At the flash, he reacted exactly as (he?) had reacted last night, diving headlong for the same bank burrow. 6:48 the medium size animal appeared at same spot he was last seen, came down to crossing & crossed over into upper pond. Meanwhile the "monster" had also reappeared from his retreat & floated back and forth just above scene of his recent flight as if wishing to go back down to mud shelf. He floated, dove, surfaced, rested on partly submerged log and even got to within 3 feet of the dam before suddenly deciding not to risk it again at 6:51 and swam back up stream to cross over into upper pond.

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Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

Sept 4. 6:57 one cutting between crossing & channel dam. 7:00, one beaver took a lot of cuttings over to bridge cove to feed on them. 7:10 he crossed back over to where he was before and cut a few more and dove at 7:12. Think this was the "monster". 7:16 one seen in channel & swam down to dive opposite bridge cove. 7:18 one cutting & eating between crossing & channel dam. 7:25 beaver appeared in pond opposite little red, swam up & dove into house. Left 7:30.



Sept 6 3 PM fresh mud, still damp, has been plastered on house. Much dried mud already plastered. 6:20 PM Big Snag Seat below lower rockslide colony.

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Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

Sept 6

Just got settled when a beaver in W trib. slapped 3 times in alarm. 6:28 heard chewing sounds from same place & 6:29 one swam down toward me but I lost him in willows. 6:32 more chewing in stream area right opposite me but willows hid view of beaver. 6:34, one floated & then swam slowly upstream from corner. 6:40 one coming down the stream with some cuttings, disappeared into a cove near small pine & was heard chewing vigorously. 6:45 it swam down farther & went ashore again to cut more willow. Recognized it as scartail thru binocs. 6:53 cut switch & came down to cove where it dove. Orange incisors easily seen. 6:55 large one swimming back & forth just above "Jim's dam". Scartail was still chewing away nearby. 6:58 one again seen in pond above Jim's dam, repeatedly diving. 7:00 Scartail landed, spent 5 minutes scratching and combing, mostly at dorsal root of tail but also at genital opening and cheeks. Then rested, sitting stolidly on tail for several minutes like a fat old man. 7:16 it

Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

Sept 6

moved off downstream to the corner, then back upstream again, past the resting spot and farther still and began to cut. 7:20 it came down to cove again, stopping en route to cut some more. Chirped in the cove.

7:23 it went downstream past its resting spot a few feet to cut but immediately turned & went back up to where he was earlier and cut till 7:28 when he swam down under water to cove and fed. 7:40 went down, then up to place he'd first "whacked" upon my arrival, dove, surfaced and cut willows. 7:44 came down to corner where I lost him at 7:45. Weather clear & calm but cold all evening; windy at times during day. I left 7:46. Surveyed c Betty L.L. Rockslide

Sept 7

Sept 10

Sept 11

Heavy overcast c occasional overcast in afternoon. Very cold. Set camera out c Peromyscus bait. No picture. Snow 8" deep has draped the landscape but melted considerably during the day. Weather raw and skies overcast all day. Junco + chickarees very active.

Sept 12

11:30 PM

En route to upper colony flushed a covey of quail 100 yds E of trestle.

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Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co, Calif.

Sept 12

Weather bright and clear; snow soon gone almost completely. Arrived Upper Colony 2:15 PM and noticed immediately that much new cutting has been going on at the pond. New mud added to NE corner of dam & piled on to a log along which dam is built although it doesn't do any good there. Level of pond is up 2" at least. Much more mud plastered on N & W sides of house. No more work on big 13 or 14 inches near sta 23. The two trees I dislodged near sta. 25 last time (Aug. 30) have been almost completely sectioned & carried off, basal 8' of the 6" one & basal 10' of 4" one being left in place. 2:40 two alarm chirps from an unknown bird in willows accompanied by low, rapid flight of goshawk down over pond, about 50' above ground. Lots of new work on dam just above "graceful". All these ponds show definitely higher water levels than last time. 5:15 chick seen pulling mouthfuls of shredded rotten bark from fallen aspen. Table of trees cut & marked:

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Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

Sept 12	Diam	X	^	X	L
	1	1			
	2	1			
	3	11	1		
	6	11	1		
	7	1(L)	1		
	12		1		

Arrived at seat 5:30 PM. 6:15 one seen approaching house underwater and entering without surfacing. 6:23 one seen swimming up w from house to log by seat tree, where it surfaced. It held something (mud?) to its chest with its paws; swam to S end of dam and crossed over when I lost him. Sunset 6:30. 6:48 the same (?) beaver returned over same spot where it had crossed the dam, with a 3' section of a 3" aspen log in tow; took it into house. This is the first time I actually have seen beaver handling anything besides willow. 7:02 shrew (?) ran along pond edge from house to nearly Cove. 7:12 beaver left house, swam to some willows at spot he had crossed before, & began cutting. ^{& then went over dam} Underwater I could observe him kicking c both hind legs simultaneously but kicked c only one leg

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Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

Sept. 12

to make a turn. 7:16 I noticed it or another beaver squattling in shallows feeding on willows. 7:13 hit near dam, cut willow & took it into house. Cutting sounds still audible near where first beaver was but getting too dark to see. Left seat at 7:35 and walked back to camp. Heard coyotes yapping at SE end of Kibu meadow at 8:10 P.M. Clear, calm & cold

Oct 11

in evening. Upper colony 10 AM. Clear and warm after a cold night (hit 30°). Not any great addition to cutting near house but house has been plastered considerably & is covered in wet mud. Fresh aspen sticks with leaves still on them are stuck into lower framework of house and may be winter storage. Dam is in excellent repair - water higher than in summer although creek level is much lower than it was a month ago. Fisherman's tree, formerly partially girdled, has now been felled (15" in diameter). This is only obvious major working near house. 3 or 4 trees have been felled farther down, near flash tree. Leaves of Fisherman's tree are still

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Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

Oct 11

green as are those of standing aspen next to pond. Leaves of trees farther from pond are yellowing & falling. Smaller branches from Fisherman's tree just beginning to be used by beaver. A hole in the ground next to water's edge was found a little way upstream from sta. 36. It measures 2' deep by 2' diameter & may represent a bank burrow cave-in. Marking table:

Diam.	x	^	x	L
2	11 (N)			
4	1			
6	1			
7	1			
8	1			
15	1 (N)	1		
18		1		

Chickarees active
2 left 1 PM.

Oct. 12

Upper & Lower Rockslide Colonies 9:40 AM.
Upper Rockslide saw a nutcracker fly over, calling. ^{9:55} Watched a 9" brown by the beaver house for 5 minutes in the same place where I watched those 8 & 9 inches this summer. The house shows much evidence of recent plastering and the mud slide on one side of it is still wet. Hushed doe & fawn which ran up opposite bank. Lower rockslide colony. Saw creeper working up pine. The house is

J. G. Hall
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Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

Oct. 12 well & recently plastered as were the others. Water levels up in all ponds. Went down as far as lower dam but saw nothing new. Fresh mud + old mud piled up in 2 places at edge of N. channel?? Weather warm + bright. I left

Nov. 23 10:35 after seeing another nutcracker fly over the ^N ridge. Upper colony 10:45 AM. clear, cold (20°F) SW wind. About 15" of snow. Pond completely frozen over and stream frozen over about half-way - a mere trickle. House covered with 6" of snow except on S side which is bare. Extensive plastering visible. Top of house has 3" snow. Mink or marten tracks on snow covering the ice. ^{NOT MUCH} ~~the~~ new cutting on a large stake at least but a good deal more trimming of the fallen Fisherman's tree has taken place since the snow, as there are many fresh chips on the snow. The beaver probably get out from under the ice right above the dam where it is thinnest. Scar-bark has much new work on it. The 13"er started last Sept.

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Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

Nov. 23 has been felled since Oct 12 and has lodged partially on the deadfall



Some trimming of the 1 & 2" Twigs has occurred since the snow. Heard chickarees & saw 3 chickadees foraging in lodgepole. Tracks of deer, hare, marten or mink numerous. Left 12:35. Bear tracks crossing Kiln Meadow. Marking Table:

	diam	
15' N of Wiley	7	} all <u>must</u> <u>be</u> painted
near the other	9	
"Wiley"	12	
15' from double notch	14	
near the other	17	
10' from photo tree	18	
on shore	17	

Hall, J. G.

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Topical index

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A.

Topical Index to Field Notes

Beaver

Upper Colony

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68, 70, 79, 81, 83, 84

Dams: 3, 40, 70, 79, 81

Lodges: 2, 70, 79, 81, 83

Photographs taken: 38, 39, 41, 61

Rockslide Colony

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72-78

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Roadside Colony

Cuttings: 16-17

Dams: 16-17

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B.

Topical Index to Field Notes (Cont.)

Beaver (Cont.)

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Birds (Cont.)

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D

Topical Index (Cont.)

Birds (Cont.)

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Amphibians:

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Reptiles:

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1953 and 1954 (part)

Journal

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Feb 22 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co, Calif.

Main camp 7:45 AM, 0°F. Left camp for upper colony. Heard 2 coyotes from big meadow at 8:15. Arrived U. colony 8:35.

Coyote tracks on N shore, squirrel & rabbit tracks numerous in snow.

Marking record:

D	X	^
1	-	
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
15		

Tracks & slide below dam show where beaver has crossed from one "spring hole" to another over a snow bridge 10' long. A round hole in ice just

above dam showing where beaver emerged to go over dam. A dirty, track-covered slide leads over snow. This was one of their favorite summer crossings. Pond ice-covered but looks thin. At pond the old dead woodpecker-hole tree has fallen over farther, partly dislodging photo tree. Several coyote & many snowshoe, cottontail & squirrel tracks. Heard chickadee's churr. A few chipmunk tracks. Seabark shows.

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Feb 22 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co, Calif.
a lot of work but can't decide if it is new since last November's work. Top of house bare of snow. Coyote tracks go along parallel to shore within 10' of house without detouring to investigate. Ice about 4" thick outside the lodge + many aspen sticks which look peeled are lying on bottom of pond outside entrance. An odd snow-cave formed under the deadfall next to house. It's 2' wide, 6' deep, doesn't seem to connect to house. Another "bridge" slide near first one. No new work evident below flash tree nor above the big deadfall near photo tree. Most of it on islands just above + below main dam + always near water. No work on the banks. Left at 10:30 for Bob's grouse area farther upstream.
1 PM at Bob's sta. #57 many porkey droppings + snow stained a red-orange by (?) urine.

Feb 23 Upper Rockslide Colony, 9 AM. Pond covered over \approx 2" of snow which fell last night. No signs of activity. Winter wren flitting around. A

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Feb 23 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co, Calif.
melt hole over the house. One 5" asp
cut 30 yds from pond on N-slope.
8-10 one to 2-inches cut on rock-
slide. One asp has branches
trimmed of bark but not cut,
possibly work of porcupine or snowshoe.
This is 50 yds from the pond.

April 11 Left main camp for upper colony 8:05 AM.
Sky clear except for a few clouds in West.
20°F, slight breeze, about 1 foot of
snow left on ground. On way up
saw chickadees, sapsuckers (red-naped?)
heard flicker & jays. At least 3
coyote tracks above big meadow.
Occasional hare & rabbit tracks
also some squirrel or chipmunk.
Heard but didn't see a redtail
screaming. Upper colony 9:45, water
very high; thin veneer of ice on pond.
Water even on N side of lodge.

Marking chart:			10:05 lone g.c. singlet
D	x	^	foraging in w. firs. Re-
<1	1		cent alder use evident.
1	E out		Lots of cuttings on bot-
2	1 (only 1)		tom, just upstream
3	"		from old scarbark.
4		;	A large aspen, felled
5		;	
12		;	

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April 11 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co, Calif.

Upper near scarbark has been trimmed considerably of branches ^{on side} next to water, branches on upper side still intact. Saw woodpecker, too small for a sapsucker. Red head & throat, back black & 2 white stripes running up on either side of the midline. Some white near shoulder but not conspicuous as in sapsucker. Red-breasted nut-hatch. Townsend's Solitaire in Jeffrey.

April 12 Left at 11:30. Upper rockslide colony
R'slide 11:15 AM. Thin ice on pond, snow wet and about 2-3' deep. Lodge still has breathing hole but more of lodge is exposed. Scratched water level on rock at N corner of dam. Not much new cutting visible. Asp have "pussy willow" now. Lower ^{rockslide} colony, 11:30. All snow gone from N-dam but 2-3' still on S. dam. Lodge covered by 2-3 feet. Marked water-level & 2 cut sticks east of N. dam.

June 6 1/4 mi. upstream from upper rockslide colony 2:15 PM. Sky mostly overcast; it's been raining off & on all AM. Ground is wet, snow patches here and there up on ridge of south -

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June 6 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co, Calif.

facing slope, down to stream in
rare spots on N-facing ones. Mole
workings numerous, chipmunks & ground
squirrels active, R.c. kinglets, white
crowned sparrows singing also chip-
pies & helldings heard. Occasional
light breeze. Beaver have been cut-
ting some asp which extends from
above road to creek:



Deadfall at "A" had evidently been cut
by Glenn or Al into 8'-10' sections &
then tossed across the road.
Beavers have trimmed some of these
and have also cut 3 large aspen grow-
ing between the road & stream, 2
six-inches and one four-inches.
One of the six-inches has been hauled
off, the other one & the four-inches

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June 6

Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co, Calif.
are still here + are trimmed to some extent. A few willows are in tiny leaf, most of them not in leaf. These beaver are going at least $\frac{1}{4}$ mi for these aspen unless another colony has been started since last fall. A little evidence of willow cutting on opposite bank. Some v. old asp. stumps 20' down from the fresh asp. cuttings + on same side. Marmot ran across road. Robin, song sparrow singing. Juncos around; beautiful ♂ And. warbler flew amongst pines across creek. A few fresh beaver twigs lying in shallows just opp. the cut-off road E. of the "roadside camp". At least some are aspen. Looks like a dam is going up just below this pool tho' I can't get near enough for a good look. Yellow warbler ♂ isolated in willows over creek. 75 yards farther down a 2" alder recently cut 2½' above the ground (cut when snow was on ground) but has hardly been touched. Large "black + white" woodpecker flew up into pines from water's edge. Note \approx to Hairys. Reached H. Rockslide colony at 3:30. House

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June 6 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.
R'slide shows the great addition made last fall by way of plastering. Should have a photo of this. Two large midden heaps near entrance. Willows show considerable use which may be just recent or may have been going on all winter but was hidden from view on previous visits. Glen reports seeing the beaver here in broad daylight last week. Water level 2" higher than it was on April 11, tho' there's a bad break or leak in the dam. A great deal of willow-use here as Glen said, + moreso than was the case last spring. Dam just below big one in good shape. And. warbler feeding at water's edge. Two small swifts, probably Vaux, circling high over pond. Next dam on downstream also intact. L. rockslide seems to be less active than upper. Evidence of willow use not as extensive. Water v. high. Grass close-cut at water's edge, deer? Mayfly colony. R. breasted nuthatch calling from willows before moving to l'pole. Song sparrows singing in willows overhanging stream. Pewees. Some otter-like tracks in stream side.

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June 6 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

mud. 8" apart, 2" wide, hind & fore-tracks almost superimposing; maybe just beaver. Can't tell much about activity but, although water is higher than in summer & fall, ~~as~~ you can ^{now} walk on on the marshy area N of the RR "bridge" now without getting your feet wet, not possible ^{no water is now lower} last summer. Steller jays in l'poles 4:25. Sprinkling a little from time to time but clearing up eventually. Flicker calling, two T. solitaires in Jeffreys, one fluttering wings while perched a foot below the other but no copulation. Two tops of aspen, 6-8' from ground cut by beavers on S side of creek opp turn-off place. Probably cut this winter. Also some old cutting here. One 3" asp partly cut here too. No asp. in leaf yet. 7:30 PM Al, Bob & I saw 2 or 3 sites just above upper Rockside where dams may be beginning but it's v. hard to say yet. ~~25'~~ up from this a bigger blockade more probably but not certainly is beaver work. 25' farther up from this blockade is an extensive cutting & feeding area

June 6 Sogehen Creek, 3 mi. NW ~~to~~ Hobart Mills, Nevada Co, Calif.
of alders. 7:45 definitely found a
dam farther up still. This is the spot
I suspected earlier this afternoon. A
tremendous deadfall forms part of it.
Aspen supply only fair on S slope &
shows both spring & winter cutting.
This may be start of a new colony
be the 2 yr old evicted from one of
the downstream colonies. Two deer.

June 7 Upper colony. Cold, raw, snowing & raining
intermittently. Lots of new work. Marking
chart:

D	X	^
2	III	
4	I	
6	II	
7		I
11	I	I (wiley)

Dams all in v. good
shape, main one esp.
shows many fresh
asp. logs added to it.
Cutting mostly in med-
ium to large asp. near
house on N shore.

one 3' deep snow patch on N shore, others
here & there but snow almost entirely gone.
Many peeled sticks on pool bottom. Dead-
fall dam in good shape, also true of a
dam just below scabark. Lots of al-
der use this winter. Light gray, 4"
shrew zipped along shallow water
2" from shore & only 2' away from me.
Near crossing tree a peculiar,

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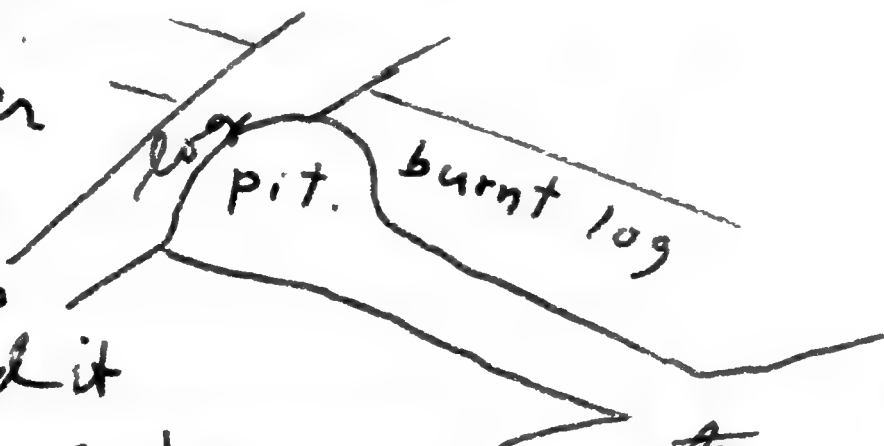
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June 7 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co, Calif.

rounded track leading slightly uphill from water & ending about 6' in a little depression 1' x 1', partly gnawed out of two old dead logs, one of which is burnt.

Couldn't remember or couldn't see my mark for fisherman's tree(?) so remarked it

twice. It is 17 or 18". 2 deer. — water



Sept 11:40, weather clearing but still v. windy. Upper Rockslide 12:30 PM.

6" asp on rockslide winter cut about 12' off ground & since has been girdled at ground level!! Never saw beaver do this before so photographed at 100 f11. Also took shot of U. rockslide lodge ⁵⁰⁻¹¹ & one of general area 50 f16.

June 20 Arrived main camp about 5:30. Weather perfect. Bob H. + I marked out one of his trap lines in meadow after supper.

White-crowned sparrows, juncos + Cassin's finches. R.c. kinglets, pewees + olive sided flycatchers. Nighthawks put on good booming displays for us. Of a pair, apparently only one (the ^{one} ♂?) does booming. Don saw U. rockslide beaver in

J.G. Hall
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June 21 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

Main Camp. Pewees woke me up at 4:30. Spent most of day doing paper work. An absolutely cloudless day from beginning to end - fitting for longest day in year. Saw an Empidonax (Hammonds?) fly-catcher along stream in early afternoon. Spent some time observing in the under-water tank. Only partly successful in cleaning algae off windows. Got good looks at some brookies, small about 4-6" long, feeding a foot or 2 from the NW window. Move v. little, only enough to maintain stationary position an inch or two above rough rubble bottom, picked up food particles carried to them by the current or occasionally darted aside to snatch something that floated a few inches to one side of position. Water pretty milky still & high - up over

June 22 tops of windows. Roadside colony where Rte 89 crosses Sagehen 2:45 PM Red-breasted sapsucker's nest cavity in big lodgepole 100 yds SW of bridge, about 10' up. Parent entered, left & re-entered in space of about

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June 22 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co, Calif.
15 min. Good light for photos this time of day. A very good look at Olive-sided flycatcher - note chid-it or chee-dit almost slurred into one syllable. Also a creeper. Reached roadside colony proper at 3. About 90% of the aspen on the SW side has been cut. The house seen here last year is in fairly good shape as is the dam immediately below it but ^{house} lacks any new material on top. Warbling vireo & hairy woodp. in vicinity of pond. 40 yds downstream from this house is a second, newer house covered \bar{c} mud, some of it wet, as well as with new willow twigs some \bar{c} leaves. This has been built since my last visit here, but the dam immediately below it was here then. It's obviously in active use and on the SW shore directly opposite is one of the few really fresh cuttings - (one this shore) - a 8" aspen with fresh leaves still on it, cut possibly within 3 or 4 days or even less. Already partly trimmed above 4" level

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June 23² Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co, Calif.

and a log about 4" in diam. is floating beside the house. A well-defined path leads from tree to pond. The dam just below this house is in better repair than that just above. Is lodge above in active use? This dam such a good example of opportunism as it's built largely against a l'pole deadfall, that I should have a photo of same.

The aspen supply immediately adjacent to this new house is even poorer than that next to upper house but willow supply is the same. Evidence of new cutting in the good aspen stand below which was not or only v. slightly used last year. Are the beaver moving down into this area & will they build new houses farther & farther downstream into this good aspen stand? Crossed over in upper part of this good stand in which there ^{are} some 8" cut recently. On NE side there is sparse but continual aspen cutting. Slope much steeper & aspen much scarcer here. White fir & l'-poles come down to water's edge here

J.G. Hall
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June 22² Sagehen Creek, 3 mi. NW Hubart Mills, Nevada Co, Calif.
and strangely a lot of white fir of small diam has been cut, the branches that bear the needles showing up once or twice on the SW side & often on this side. About 6 half-inch fir stumps here & one 6" stump with trimmed log lying nearby! Have never seen such concentrated fir-use - the log has been completely trimmed of bark. Get photo of same. No pine-use tho' they are commoner than firs here. About 90% aspen on this side has been used. Upper dam obviously has more leaks than lower one. Left at 4:30. Weather perfect & cloudless all day just as it was yesterday. (In the morning about 8 AM I had a good look at a young marmot at the bridge log stump. Also a ♀ hummer.)

June 23 Main camp 8:30 AM at bridge log.
Half grown marmot still there. Meadow across from camp about noon, saw large bear dropping at margin of meadow & forest; mostly grass. Two old patches of bear droppings seen a couple of days ago at garbage pit. RR spur above Lailu meadow, 2 PM. Two dive-sided

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June 23 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.
flycatchers perched about 50' apart on the ^{dead} tops of two live jeffreys, about 40 yds. from the willow-bordered stream. Gave the "plip-plip-plip" call several times. Upper colony 2:30 PM. Aspen in small leaf, otherwise really not much change from general situation here on the 6th. Willows up here in smaller leaf than those down by camp. Found a good "crossing" trail above the "symmetrical" pine. About 10 large ^{peeled} (up to 5") aspen logs caught below the dam which is the next one up from twin pine dam which is in excellent shape. Went no farther down than main dam on S. side. Left 4 PM. Weather cloudless. Marking chart:

June 24

D	x	1
1	1	
3	111	
4		1

Kilm Meadow, 1:45 PM
Went with Bob while he examined trapping sites for Microtus sign. Blackbirds, bluebirds and white-crowned sparrow seen. A good marmot den 150 yds W of shack, by rock pile at base of pine. Flushed off a ♀ Brewer's from nest in middle of meadow grass. Nest contained 5 young.

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June 24 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co, Calif.

The meadow is still wet & marshy in places and there is abundant sign of past Microtus workings & winter nests although present sign not as fresh as 2 weeks ago. Hillside N of camp 7:45 PM. Bob H. & I took hike up slope & tried to call birds within range by the "Pigmy owl" whistle. No definite success tho' chickadees did come close to watch us. Saw a fork-horn buck & antlers about 1' long. Also Empidonax olive-sided flycatchers, ^{W. tanager, Aud. warbler} pewees, ^{R.C. h. let,} nighthawks, ^{juncos} robins & heard what we took to be a hermit thrush. ^{W. tanager} Returned to camp about 8:45. Another cloudless day.

June 25 Upper Rockslide colony 8:05 PM. Al, Don & Elbert & I drove to upper colony parking place, just in time to see a beaver carrying willow branches in mouth from dam to house where he dove with it. Elbert & I watched till 9 there & Don & Al went down to the lower colonies but no more beaver appeared. Hairy woodpecker, pewees & robins around but no nighthawks. Full moon. Weather cloudless all day.

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June 26 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co, Calif.

Roadside colony 10 AM. And. Society at beaver pond. Talked to the leader Ferd Ruth. Saw W. Tanager & photographed 6" fir tree that had been cut & stripped completely. Continued on downstream; found robin's nest 10' above path in an 18' Jeffrey. Ground squirrels & chipmunks abundant on grassy flats, jays & juncos on the pine slopes, pil. warblers & pewees in streamside willows. "Pigmy owls" calling from high up on slopes & answered fairly well when I imitated their calls. Think there were at least two of them. Answered every 6 or 7 secs for a while then quit responding. Reached the lower colony at 11. Creeper on 20' snag, chickadees singing in deep shrubbery. First impression one of much increased cutting in area of upper N dam which has been lengthened considerably to make quite a nice subsidiary pond tangled with many large aspens recently cut. They've cut

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June 26 Sage Hen Creek, 3 mi. NW Hobart Mills, Nevada Co, Calif

some nice underwater canals. Saw a couple of swallows, probably tree swallows flying high over the pond. Main pond has a high water level and the dam is in good repair. Water covers most of the log jam + I used last year as a bridge. Water is 7' deep in some places just behind dam. Some winter use of willow evident in spite of all the aspen available. Maybe the beaver get special food minerals from willow + fir bark, they seem to use it even when lots of aspen is at hand. Very few large aspen left standing in main pond area, a noticeable Δ since last summer. Found a bank burrow cave-in on S side. Took a trip to inspect the lodge at close quarters. All kinds of peeled + unpeeled aspen logs floating + sunken near house. Average house diameter at water level 12', height 5'. at least three entrances. Lodge topped \pm old & new logs up to 4" in diam, sides still heavily plastered from winter. Located a good lookout

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June 26 Sage Hen Creek, 3 mi. NW Hobart Mills, Nevada Co, Calif.

tree near house + took shot of the house. From this lookout you can see most of the main pond. Song sparrows singing in willows.

About 2 PM I started marking trees at NW end but promptly lost my pencil after only a few were done so quit.

D	X
1	III
2	HHH HHH
3	III
4	I

At one spot where 2 aspen + 2 fir were side by side, firs were used + aspen ignored:

3" 4" 3" 3"
ⓕ ⓕ ⓐ ⓐ
The 4"

fir was cut + half stripped of bark, the 3" fir was about $\frac{1}{3}$ stripped, both aspen were untouched. This seems to show a definite choice of fir in this instance. Saw ~~four~~^{five} more small fir stumps of avl. diam 2". As I went back up trail to leave I noticed a new colony established just upstream, will examine it more closely tomorrow. Almost caught a mole as he was going into his burrow about 10' from the water's edge. Fox sparrow singing in asp a little farther up. Reached car about 4. After supper took a short

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June 26 Sage Hen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

hike up the western-most meadow opposite main camp. Saw lots of marmot dens where big old lps have fallen over; can almost predict now where to find their scats. Good spots for some pictures. Surprised some deer in the timber and three snow plants. Weather again clear + balmy all

June 27 day. Lower colony 10 AM. Saw green-tailed towhee on way, perched in small Jeffrey standing in field of Wyethia. About 6' off the ground. Rest of morning continued marking used aspen + completed practically all those on the N shore. Marking schedule below.

D	X	L
1	52	
2	73	
3	40	
4	35	
5	7	1
6	3	
7	1	

Just before lunch I checked below dam briefly and there does not appear to be a noticeable increase in ^{cutting} activity here. However, there was one area in that section I didn't get to so must check it later. Then I followed stream in hip boots from the upper part of the lower colony to

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June 27 Sage Hen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

the Roadside colony to have a look at the "mole" colony I stumbled on yesterday and any others possibly not visible from the path. The mole colony is a distinct one, not just an upward extension of the lower one, as there is a space of no cutting lying between them. Presumably this colony was started last fall by the 2 year olds of the lower colony. Much scattered cutting & 2 fair dams but no lodge; maybe bank burrows. Has the earmarks of a new colony & will be a good one to watch. Saw no new colonies between this one & the Roadside one although sporadic new cuttings appeared even farther downstream than the extensions I saw on the 22nd. Saw ♂ W. Tanager perched in a drowned l'pole in middle of Roadside pond about 3 P.M. Wish I could find the nest. Doe nosing about in meadow near upper lodge. Where are the fawns this spring. Checked dam at "new" colony but

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June 27 Sagehen Creek, 3 mi. W Hobart Mills, Nevada Co., Calif.
Nothing startling. The 4 eggs in the
juncos' nest had hatched. Weather
clear & bright in AM, clouding up about 3 PM.

July 6 Upper Rockslide colony 7:40 PM. Adult sur-
faced in middle of ~~dam~~ pond after swim-
ming about 40' underwater from lodge.
Swam toward S edge of pond & then dove.
♂ And. warbler foraging almost in water
at dam. Chickadee with insect in bill
seeing flying down-stream among the tall,
dead l'poles of the pond. Lost sight of
it. At 7:55 one returned with more
food. ♂ W. tanager seen briefly in
a living l'pole at streamside. Juncos
moving about in willows just below dam,
not coming right to water's edge like the
And. warbler did. Saw chickadee enter
the hole occupied last year by hairy
woodpeckers. 8 PM. A beaver returned
to the lodge with a willow cutting &
dove in with it. 8:10 While I was stand-
ing about 10' from the lodge, in plain
sight a beaver left house & surfaced
20' from it, seeing me he "plopped";
rose again immediately to pop again,
surfaced and swam back and forth
in middle of pond, then swam off to

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July 6 Sage Hen Creek, 3 mi. NW Hobart Mills, Nevada Co, Calif.

ward S shore where he was lost. Later Betty saw it in grass of the S shore, apparently eating the grass (never seen before doing this). The grass immediately around it was clipped. 8:28 a beaver, possibly the same one, seen swimming from direction of S. shore and swam back & forth a few times in front of the house before diving into it. Just before it did dive, a second beaver appeared, also coming from S. shore but having a willow cutting. It "plopped" almost as soon as we saw it but then surfaced, swam to lodge, dove & entered with the cutting. Betty, who was lying on the log almost on top of the lodge, could ~~hear~~^{hear} gnawing noises. 8:35 beaver surfaced and swam back & forth in the pond. This action noted several times before seems to be one of suspicion but not fright. The gnawing noises persisted in the house. The beaver then disappeared toward S shore. 8:55 a beaver sighted swimming v. rapidly near midsection of the dam. Slowed down as it approached house, then dove into it. I left at 9 PM. The evening was clear & calm.

July 7 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co, Calif.

Spring Camp 8:30 AM. Goshawks swooped thru camp about 4' above ground, headed downstream. Didn't make any apparent passes at the local vertebrates.

L.colony

Lower Colony 10 AM. Again heard "pigmy owl" on way down. The chipmunks are just thick in amongst the Wyethia and the path is a deer highway tho' I've yet to see a deer down here. Continued marking trees at the NW corner of the colony but also did a good many out in the water of the 2 enlarged ponds. Obviously considerable cutting has occurred here even since my last visit in June. A view of this grove must be in one of the photos to be taken periodically. 11:45 found 18" garter snake with ♀ pil. warbler in jaws; grassy meadow area at streamside. ^{This place loaded w. y.l. frogs + toads.} 1 PM saw ♀ (?) Calliope hummingbird feeding on the columbine nectar. It had a green back & some rufous in tail. 3 PM Zapus on a wet little island surrounded by beaver ponds + very wet. Here also saw a tremendous toad

July 7 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

with a body about 5" long. Couldn't catch him by the time I'd laid down my paint, etc. Marking record:

D	X	L
1	44	1
2	90	
3	45	
4	26	2
5	22	
6	7	
7	9	
8	5	1
9	6	
10	5	
11	1	
	<hr/> 260	<hr/> 4

Left 4 PM.

Weather clear but breezy all day long. Saw Goshawk soaring butes - like E of camp late afternoon.

July 8 Sierraville & Sierra Valley, Sierra Co., Calif.

10 AM, Clear-hazy. Hot. Irrigated alfalfa field habitat. Meadowlarks, magpies, Beechey ground squirrel, barn swallows

July 10 & W. kingbird, ~~Lower~~ Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

Lower Colony 10:05 AM, weather clear & calm although it was cloudy & even sprinkled a little last night. At least 7 trees had been cut & two others notched since my last visit here on the 7th. This was in the NW corner where cutting has been most fresh this summer. Watched a 14" garter snake in a quiet backwater 5" or so deep. He was submerged completely.


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July 10 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.
L. colony for first 10 minutes. Pond was loaded
w/ R. boylei tadpoles which he was evidently
hunting. Lots of mayfly nymphs
here too but he paid no attn. to them.
Twice while submerged he stuck
out his tongue just as he would
do in the air. After 10 min. he raised
just his head above the surface. Twice
the mayfly nymphs actually crawled
out on his head but he didn't budge.
He made a guide motion & a tadpole (in-
visible to me till then) darted out to
deeper water. Don't know if he waited
for a tadpole to move & then made
a pass at it or had his eye on one
all along & then made a stab &
missed. A little later he did
this again & missed. I moved on. Song
sparrow, Pewee heard. Saw 2 Red-
tails circling v. high directly overhead
at 11:40. A lot of new mud has been
added along the middle of the main
dam. With maybe one or two exceptions there
has been no new cutting on the S. side.
It's all sprouted. However, I finally
did notice that the beaver have eaten
some of the sprouts in contrast to

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July 10 Sagehen Creek 3 mi. NW Hobart Mills, Nevada Co, Calif.
superficial obsns of this in backslope colonies. At 3 PM I ran out of paint so scouted downstream about $\frac{1}{2}$ mile but saw only very few new scratches here and there, no more indications of downstream works than was evident last year. 4:05 surprised a chickaree in high grass at streamside. Ran to a deadfall, watched me, then took off churring. Found Junco's nest near here in same habitat. 4 whitish eggs = brownish-red spots at one end: . Aspen seems to be thick & would support an extension of the colony below the main dam. Fox sparrow flew from ground to low bush; "chinks" note ~ to brown towhees. Like to get a photo of a balanced stump in main pond.

July 11 Marking record: For July 10

D	X
1	95
2	66
3	37
4	17
5	45
6	5
7	4
8	3
9	2
10	2
11	2

Upper Colony 10 AM. Looked around the pools for trout = Murray Newman. Brooks are all ~~that~~ we saw, mostly small but some up to 6 or 7". Caught some inch long fry in pools above the colony & one

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July 11 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.
pool at the trestle (over main stream) on way back. Found nest holes of Williamson's sapsucker & tree swallow in holes in a tall dead L' pole, 25' & 35' up respectively. The sapsuckers had large young judging by the cries coming from the hole. The swallow didn't actually enter its hole. Weather very hot but clear all afternoon. Left about 1:30 PM. I didn't take care to look for cuttings but superficial impression was that there had been little if any additional since my last visit. Lower Rockslide colony 8:30 PM. While fishing I observed a beaver floating in the N. channel; it was getting pretty dark.

July 12 Halfway between Spring Camp & Kilm Meadow 9 AM. Betty found a nest of Pil. warbler on the ground close to the stream in grassy meadow. It was under the protection of an overhanging willow about 2" above the ground. There seemed to be two pairs in the immediate vicinity, although

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July 12 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co, Calif.
only 1 nest was found. No territorial behavior observed. When first approached the ♀ was on the nest but was flushed when we got 3' away; didn't alight on nest while we watched but flitted around nervously in the willows. Nest contained undetermined no. of young relatively helpless. Main camp 11:15, photographed a chickadee at nest cavity in a dead stump. Hole about 2' above ground. Parent not very shy, took photo from 3'. 2:15 PM found a Pine siskin's nest in a branch of a 2' pole overhanging the stream. Couldn't tell if there were young in the nest as it was 15-20'

July 13 above water. Cold Stream, Smith-neck creeks & Sardine Point Rd, Sierra Co., Calif.
7:30 AM. Weather hot & clear. Went along to Clyde Shehorn while he reset his beaver traps & scouted beaver country all morning. Best beaver country in Smith-neck creek where there is a chain of dams over $\frac{1}{2}$ mile long continuously. Beaver cutting actively much more so than at any Sagehen colony. Seven

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July 13 Smith Neck Creek, Sierra Co., California
Mallards in one of the ponds. Clyde says one "colony" could occupy more than one house at the same time or that two separate colonies could be adjacent. I'm not sure. Tagging & obsn. seems to me to offer the only answer to finding out just where a given beaver will go. He says the scent mounds are used starting in Oct & lasting on thru Dec. Left at noon

July 14 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.
Upper colony 11:30 AM, clear but breezy. Very little if any aspen cutting on E end of the colony but some alder cutting on S shore of E end. "Photo" tree just W of lodge has been dislodged but, being dead before, was not touched. farther W on N shore I marked "o" on a live asp that has been notched several years ago. cutting this tree & studying the rings may reveal a date of cutting prior to 1948 (the earliest date yet established at any colony by the nodding method). Lodged trees, unless dislodged within a week might as well be counted as no tree.

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July 14 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

marking schedule for today:

D	x
1	4
2	4
3	6
4	4

Almost all this cutting was on N shore W of Lodge where the gnarled aspen growths occur on a rocky slope. However a good deal of activity also is going on at least in dam maint. on SW shore. Saw large beaver swimming under water at 2:55, ^{FIRST TIME SEEN IN MIDDAY} in a little water hole almost at my feet just down from burnt stump. He seemed to appear from a bank burrow + disappear into a downstream extension of the dam which is just ^{above} ~~below~~ "double pine" dam. This extension looks as if it might be the beginning of a new house here. Both these dams much better maintained than last year. This ? house had a lot of fresh asp. logs in + on it. Much alder use (up to 2") near crossing tree. An excellent canal, running water near a bridge up from the original crossing tree. Even 1" alder roots had been cut through to help clear the canal. Completed marking here July 14, 1952. Left 3:10 PM.

- July 15 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., California
Spring camp 10:30 AM. Goshawk flying high over camp in a downstream direction & calling in flight. Saw mt. quail a little later flying up hillside between the two tents.
- July 16 Roadside colony 11 AM. kingfisher being chased by some smaller bird. Lower colony 12 noon. Heard kingfisher but saw none. Surveyed all afternoon with Bill. Weather clear + hot, turning cloudy & sprinkling a little by 6:30 when we left.
- July 17 Upper colony 9:30 - 11 AM with Leopold. Suggested a 3% sample for ~~line transect~~ sampling (of aspen) but 5% might be better to give a margin of safety. Also suggested a line transect or two for studying willow use. Count + measure each willow stem + check annually the change in stem measurement. Use metal stakes for marking photo pts + transect lines. Upper trestle 11:30. ♀ Williamson's sapsucker feeding a young bird perched in a young l'pole 75 yds from the dead home tree. a swallow's head twice seen peering out from its nest hole, before one + a brownish head flew out to be

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- July 17 Sagehen Creek, 3mi. NW Hobart Mills, Nevada Co., Calif.
immediately replaced by another
head colored metallic blue. This
bird also flew out at 11:35 + was replaced
in the hole by another brown-headed
bird. I have assumed these to be tree
swallows but Dr. Miller thinks v.g.'s more
logical. Will have to make sure. 11:45
a small bird (Chippy?) flew from a
nest constructed in a pocket in the
earth held in the up-ended roots
of a large fallen l pole just above
the Kilm Meadow ford. Rockslide
Colony 9 AM \bar{c} Leopold. More talk on
measuring willow use: pick a strip which
has both aspen + willow when possible:
~~aspen willow~~ ~~1 asp~~. Read Harman's article on
Range-survey methods. Draw maps \bar{c}
concentric circles with "isocuts". Change
maps by years or ^{months} ~~maps~~.
- July 25 Lower Colony, 9 A.M. (With A.H. Miller
and B. Hoffmann) On way down to colony
Dr. Miller pointed out many birds to us.
Solitary vireo in an aspen by the
stream. Tolmie warblers in willows of
stream border, Dr. Miller shot 2 σ^7 ;
plumage well worn he said. Audu-
bon's ^{Also yellow warblers} warbler seen. Red-tail hawk soar-

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July 25 Sage Hen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.
ing over timber at N end of pond. Mr. Miller identified a ♀ hummer as Calliope which is what I had thought previously should be the common nesting hummer. He said you're liable to see rufous in here almost any time though, also. Wright's flycatcher foraging out from 40' pine in a sage area, flying out onto sage or perching on dead limb. At NW end of colony some new cutting, some of fir dies but not marked today. Traill's flycatcher in 20' l pole in willows. Underparts yellower, throat darker than Wright's. Mr. Miller mentioned possible effect of beaver dams on such sp. as song sparrow (nests in willow areas but not on ground) fox sparrow (nests on ground under willows) & yellow warbler. Flock of red crossbills settled in a large l pole to forage on S side of pond. Mr. Miller shot a juv. ♀. Good fresh drag trail on SW end of pond approx. opp "mole" colony where some asp. + a great deal of fir (relatively) has been cut + barked. Left at noon. Good clear weather all day.

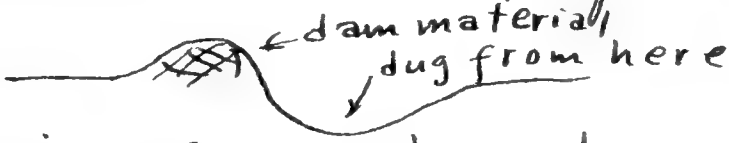
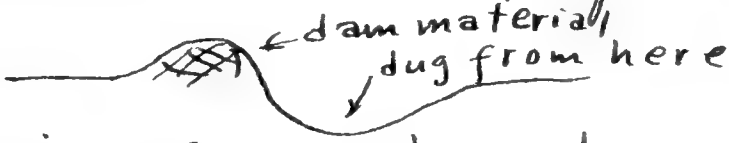
July 26 Lower Colony 10:30 AM, clear, light breeze. Caught up on marking in NW corner

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July 26 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.
and completed that of the extension
or mole colony. Think I got this virtually
all done but will recheck. Marking schedule

Diam	NW corner		Mole colony	
	X	L	X	L
1	13		38	
2	20		51	
3	17		25	
4	10		9	
5	1		4	
6			5	
7				2
8			2	
9				
10				
11				1
12				
13			2	


Some new
damming has
been going on
in a grassy
area & is com-
posed largely
of grass & earth
uprooted just

upstream:  Thought
about analyzing  downstream. seeds
for proportion of willow, asp & grass; may
or may not be feasible. Lots of fir be-
ing cut on SW shore, more absolutely
& relatively than anywhere else on
the watershed. Also much fresh
aspen cutting, some of it clear up to
the RR but seems more haphazard &
less intensive than that on NW shore.
Again it is obvious beaver actively seek out
fir in many cases. Noticed one case where
beaver went 30 yds upslope to cut a 3"
fir, ignoring about 25 cops of about
the same size on the way up. An-
other peculiarity struck me in re-

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July 26 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

yards the way they treat fir vs aspen. Aspen stumps almost always left untouched & the trunk either cut & peeled or at least partially peeled ~~but the~~ with the bark of the upper trunk & smaller twigs being preferred but the firs are often barked completely in the lower trunk region without being felled:  or when felled the bark of the stump is almost always eaten and this practically never occurs in aspen. Even after being felled the bark of the upper, smaller parts of fir is usually left untouched, the bark of larger diam. being preferred. I don't know what this means but the beavers must have some craving for a certain material in the fir bark. This upstream area of current active cutting is continuous with the mole colony first identified on the N shore. Located chickadee's nest hole in asp on N shore of the mole colony where Mr. Miller had roughly located it yesterday. About a dozen brookies in main pond of the mole

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July 26 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co, Calif.

~~garden~~ colony. Judging by the old, low cuttings & high winter cuttings I'd say this colony had been in existence since early last fall. Largest dam horse-shoe shaped. Workings go clear up to the stream-side shack. ^{Left 14 PM} Upper Rockslide colony 7 PM, set out a beaver trap a N end of main dam. Spring camp 10 PM surprised a bear getting into our garbage & sugar can and chased him up the hill a couple hundred yards. Came back in about $\frac{1}{2}$ hr. so chased him away again; he was a medium-sized brownie. About 11 PM heard what I think must be marten on our tent roof. Also heard mice but too big for a mouse, about like a heavy

July 27 squirrel. Bear had torn up the spring getting a gallon of milk & messing things up generally. Caught no beaver but reset in same place in evening.

July 28 Road $\frac{1}{2}$ mile down from camp 5 PM, saw marten run across road &

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- July 28 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.
up slope to disappear in rocky area & brush. Mistook it at first for large squirrel. U. Rockslide colony 7-8:45 PM. Hoffmann & I observed till dark but saw no beaver here. Made some ruckus setting traps & this may delay their appearance or maybe they just weren't out there tonight. No beaver caught here when checked this AM.
- July 29
- July 30 7 PM left traps unset tonight but watched U. colony till 8, being careful to make no noise on approach - still no beaver so perhaps "ruckus" of setting traps is of no consequence. Then went down to lower Rockslide where I noticed one beaver here twice or two beavers separately. This was in the area of my most active watching last year. Water higher here and lower in the very lowest part of the colony than was the case last year. This was noticed on June 6. This may be due to better upkeep of the dam just below the submerged "sink hole" & poorer upkeep of the large one built along the giant deadfall farther down. Left 8:45 PM.

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July 31 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co, Calif.

Bob H. found fresh bear tracks in dust of road this morning 50 yds down from camp and Kensingers + shepherd took shots at one up at Kiln Meadow last night. We spent all afternoon mapping N shore of U. Rockslide colony. Set one trap in vicinity of a new dam below main dam + one in the lower R'slide.

Aug 1 No catches in traps. Tom Kearn + I set one trap above L. Rockslide but left the other one unset, then climbed the obs. tree to watch from 7:30 to 8:30. Quite a bit of activity, saw one leat + 3 others, probably 2 yearlings + 1 adult. Adult chewed some of the bark off of a 2" asp log lying next to the dam, then spent some time digging for mud to plaster against dam. Also shoved some sticks into dam. This was first time I've actually seen beaver eat aspen bark or dig + carry sod. Spent sometime eating grass and willows. One beaver swam upstream thru ends of blasted dam and around into the channel W of the S dam but, as was case last year, was not

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Aug 1 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

seen to swim up into area of the upstream dams. This behavior still an enigma. Decided on a good place to set the traps for tomorrow. Left

Aug 2 8:30 PM. No beaver caught. Spent most of day mapping - Bob & got 4. Rockslide fairly

Aug 3 well triangulated. A cold day, reset traps

Aug 4 in evening. Checked traps about 8:30 to find I'd finally caught one, a lactating ♀, but it had died (supposedly of exposure) during the night which was very cold.

However it bled slightly from nose when held up so it's possible that it got hit in head by trap. This may have aggravated situation but since she was

wholly inside trap and had no obvious external cuts (except for a slight one on a heel) I doubt if this killed her.

Spent rest of day skinning her out. She was in good condition, the skull was in excellent shape although

the incisors were quite worn down & not sharp as in the ♀ found on L. Truckee river. Brock & Kearns looked

at stomach contents which were mostly grass - some willow bark. Some nematodes found in stomach & very numerous,

Note: At 7 AM Air Temp at main camp 35.8° water temp 42.5° the lowest since July 3 and lower than we've immediately following.

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Aug 4 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

a different type in intestine and

Aug 6 ~~not~~ as numerous. Spent morning sketching in detail of part of U. R. slide colony.

9 AM heard rustling in rocks under some aspen sprouts and saw a nice long-tailed weasel peer at me for a few seconds, then disappear into the rock crevices. He was about 8' away & showed no signs of fear. 12 noon, caught a rubber boa crawling into some rocks almost in the water at survey sta #16 which is at the N end of one of the dams. It was a beauty, measuring 28" in length. Took it back to camp & tried to feed it baby frog but no luck. 6 PM had good look at white-breasted nuthatches & hairy woodpeckers in lodge poles at main camp. Had good view of the hairies. There were two, one a ♂, the other had a pink spot on the top of the head, coming farther forward along the crown than did the bright red patch of the ♂. Maybe this one was an im-

Aug 7 mature ♂. Rockslide colony 3:30 PM Saw Zapus at water's edge by one of the ponds. Set traps by 5 PM. Returned 7:30 PM to observe beaver in ponds from a

- Aug 7 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.
good lookout tree 2'd climbed in the afternoon but as there were 4 fishermen in the area the whole time until we left at 8:30 we didn't see any action. Set hooks on traps to avoid keeping any beaver in traps over-
- Aug 8 ^{Main Camp 10 AM R.C. Kinglet singing, first time in 2 wks}
night. Hiked down creek from just below meadow below camp to the Rockslide colony to check up on the new workings seen here June 6. The new dam seen then, built around a deadfall seems to have been abandoned but immediately above it is a good dam built since then. The original one has large leaks & seems to have lost its pond as the level has fallen to the point where part of the dam which was very new & ~~short~~ low, now is not holding back any water. A little below this is another small dam, not well maintained but about $\frac{2}{3}$ of the way to the U. Rockslide is a dam in excellent repair, with a deep pond behind it & fresh droppings just behind it. This is roughly in the spot where Al Jones noticed a little questionable damming early in June but at that time was not

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Aug 8 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.
nearly as far along as the one upstream
built along the deadfall. Arrived at U.
Rockslide about 11:30 and spent rest of
afternoon sketching in details on map.
Flickers heard + I saw a weasel at 5
running along the steep bank be-
tween Sta 0 + 35. Had black tip to tail
and chirruped to itself a couple of
times. Set traps before leaving and re-
turned to check them at 9:30. No luck.

Aug 10 Main camp 8:25 AM. Coyote heard yap-
ping about at edge of timber SE end
of meadow. Rockslide Colony 9 AM.
Painted traps brown but it's got too
much red in it. Adult pewees feeding
young which are out of nest + can
fly now. 10:25 Took photo of Upper
Rockslide from station "I" 1/100 sec \pm 11 azi-
muth approximately 281° ; film #1 in pack. 10:50
AM took #2 & 3 from about 60' up in new ob-
servation tree same exposure. Set traps + checked
them at 10. It's warmed up + I toyed w idea
of leaving traps set all night but didn't.

Aug 11 Upper colony 10:20 AM. Saw 2 bluebirds
on way up, also lots of grasshoppers.
Sheep have been thru recently + the Wy-
ethia shows it. A low dam has ap-

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Aug 11 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.
peared about half way between the lodge & "photo tree", partly built around the crossing logs there. Startled quail from isle between photo tree & big deadfall, it flew S. When I went over to look for nest I startled a grouse which whirred off upstream. No nests or eggs. The N end of the dam just below the big deadfall has been extended considerably. Very fresh work here and a great deal of additional cutting has gone on here in this NW corner where it was active in July. As in July, no evidence of cutting elsewhere. The 16" "E Coni" tree has been started & it & some others still have wet wood \therefore probably not more than 2 or 3 nights old. Photographed one uphill-felled ^{9"} tree at 11:40 $\frac{1}{100}^{\circ}$ N. Showed opportunity of cutting since there was a platform about 20" off ground on uphill side & beavers seem to cut from it exclusively. About noon I was watching some 3 & 4" brookies darting about in pool, one rose to surface as if to grab an insect that was

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Aug 11 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

flying 3 or 4" above surface but gave up when insect swam away. I didn't realize they could focus on insects unless they were either on the surface or sinking. Lots of small brookies in every pool. The dams opposite the cutting area just loaded w/ fresh asp logs. Couple of fresh fir cuttings, only basal bark chewed. Dam just below scarbark freshly maintained on S side of pond. No new cuttings on flash tree or main dams but they seem in good condition. Left 12:40. Weather clear this has been a hot day.

~~Lower Rockslide col~~ marking chart:

D	X	L
1	3	
2	6	
3	8	
4	13	
5	8	
6	4	1
8	1	
9		1

Lower Rockslide colony
4 PM. Reset traps. It's warm so I think I'll try leaving them set tonight.

Aug 12

Lower Rockslide colony 6:30

AM. Finally caught a live beaver! This was lower set in a muddy shallows. Med. size. Was able to punch web & paint dots on shoulder & tail: U but didn't have my plastic markers yet & wasn't able to sex it because I was alone. Released him about 7 and he swam slowly up the

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Aug 12 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

R'slide

creek, pausing briefly to chew on some willow on the way. To begin with he had to be shoold out of the trap. Finally slapped his tail & dove. Temp at this time was at the minimum for the "night" and both air and water were 49°F (at camp). Cf. note p. 124. Returned at 3:30 - Johanssens & reset traps in same locations; weather heavily overcast in afternoon & one or two drops of rain fell.

Drosera bog early afternoon. A couple of kingfishers were calling noisily & flying

Aug 13 upstream by fits & starts. Lower Rock-

1

slide colony 6:30 AM. checked traps - Brook - no luck. Weather was very warm all night due to heavy overcast. Rained sporadically from 7 to 8 but cleared up by 9. Hot & sultry & many cumulus in sky. 1:30 PM Started willow strip census samples and make three 50-foot counts. No. 1 was from ~~sta~~ sta #1 to a marked nail stake upslope & just NW of the giant snag, No. 2 was from sta. #6, E to marked wooden stake on edge of water "diversion", No. 3 was from sta. #20 to a pt. E of the dam marked wooden stake. These all are plotted on map.

Aug 13 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

I estimated visually the % use of the seasonal growth of every twig under the line. This means every twig bearing seasonal shoots - I omitted the shoots themselves if they were all that fell under the tape. This may have to be modified. Table of Results:

Sta	% Use						Dead	Total Twigs
	0	25	50	75	100			
1	23				1	70		94
2	8		4	1	3	51		67
3	18	3	6	10	5	38		80
Totals	49	3	10	11	9	159		241
%	20	1.2	4.2	4.6	3.7	66		

Reset traps at same places and left at 5. Thunder, lightning & some showers during the afternoon. Returned at 7 and watched for beaver till 8:15. It rained a good deal & beaver weren't v. active, however I saw one adult & a scar on tail &

Aug 14 a bit. Checked traps at 6:45 & got one in the lower trap where I caught the last one. This was the same beaver I'd seen last night swimming in the middle pool because he had the scar on his tail. Punched his web "C" and painted his shoulders same as the other one but tail this way: U

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Aug 15 Sagehen Creek, 3 mi. NW Hubart Mills, Nevada Co, Calif.

Lower R'slide colony 4 PM. Reset traps as

Aug 16 before. Checked traps 7 AM - no beaver

Aug 17 Plain Camp 8 AM Been seeing & especially hearing kingfishers here for over a week and one was esp. conspicuous this morning along creek opposite bldgs.

Aug 18 Main Camp 8-10 AM. More kingfisher action.

→ Upper + Lower R'slide colony 7:45 PM. Brock, Jones + I watched till 8:25, Jones covering upper, I middle + Brock the lower colony at the same time, for the first time. Interesting to note I was only one who saw beaver. Saw two adults, one of which was "C" marked two days ago. All tail paint + almost all shoulder paint gone, only tail scar identified it positively. This method of painting won't work, obviously. Weather clear.

Aug 21 Lower end of Kilm meadow. Timber on N side of meadow between it + road, 10 AM weasel chased into a 60' lodgepole by blvn Weidlein and Brock + I kept it treed while trying for a few shots. It was a beautiful long-tail with cream-colored stomach; got good looks at it from about 2' away and actually reached out + touched it once. It made no noise

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Aug 21 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.
during all the time we were hounding it. Set flash trap with \bar{c} fish as bait at base of the tree and went to visit Upper colony \bar{c} Mr. + Mrs. Storer. Arrived upper colony 11 AM and examined very briefly the N shore in vicinity of lodge. There has been some more cutting in NW area where there was so much last time but it appears to me that it has fallen off considerably. Didn't paint any of the trees and left about 11:30. Main camp 3 PM. Started hiking with Jack Lattin in Mosera bog and headed SW up the slope where we separated and I climbed up into saddle that separates Carpenter Ridge from the knoll opposite Spring camp. Followed the little stream that flows W, then N into the main Sagehen stream. Lots of sheep sign up there & I jumped two deer. Got back to camp 5:30 PM.

Aug 22 Upper Rockslide colony 3 PM. Reset traps with the Thomases then drove down to the Roadside colony to show them the 2 lodges. 10:30 PM went down to Rockslide colony to check traps. Heard gnawing just north of the little island. Put hooks on the

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Aug 22 Sage Hen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

upper trap and walked down to lower set. On way noticed that the big "sub-way" entrance was muddied up some. Lower trap set very muddy & since it was less likely to get as cold here, left trap set. Almost full moon was shining.

Aug 23 Checked trap at 7 AM. quite cold but no catch so I pulled the trap.

Aug 25 Roadside colony 9:15 AM. Windy, small cumulus clouds coming over from southwest. Redtail heard screaming from lower end of L. colony colony but not seen. Lower colony 9:30 AM.

Flushed 5 young quail from patch of Wyethia near NW corner. Flushed one by one. Call notes or assembly notes heard for 5 min. or so up the slope from where I flushed them. Marked new cuttings, again all in NW corner & vicinity. Marking chart:

D	X	L
1	16	
2	22	1
3	15	
4	7	
5	1	
6	1	
7	1	

10 AM flushed about same no. of quail from willow thicket - they resettled into another part of this thicket. Unidentified hummer zoomed in & out of same place on N shore in a aspen grove where I earlier noted ♀ Calliope. Sceloporus ran into roads of the old road about 11:10. A few frogs

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Aug 25 Sage Hen Creek, 3 mi. NW Hobart Mills, Nevada Co., California
L. colony seen from time to time. One belding seen
at Roadside colony, only a few chipmunks +
no golden-mantled ground squirrels seen
on way down to Lower colony where we
used to almost walk on them. 11:30
water near main lodge still muddy.
12:35 located another lodge across a
channel S of the large new pond just
upstream from the main pond. It's in a
jungle of willow & is smaller than the
main lodge. A 30' high burnt snag
about 25' from N of the S shore approx-
imately marks lower limit of the "mole"
colony or upper limit of old workings on
that side. A lot of more damming has
gone on since last visit, and lots more
cutting some of which I missed prob-
ably on my last check. Most is prob-
ably new & will be so entered on chart.


D	X	L
1	30	
2	45	
3	31	
4	15	1
5	2	
	123	

am adding some obviously
older cuts onto last count to
approach true situation bet-
ter. 2:20 PM scared at
least 6 quail, probably same bunch,
from Wyethia near the little shack.
Found another new dam even above
the shack + a smaller one still higher.

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Aug 25 Sage Hen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

L. colony Ponds behind these dams don't even appear to be silted in yet. A lodge is being started beside a deadfall on the S side of the large pond just down from the shack. a good one to watch & photograph periodically. Material now only 1' high and not over lowest part of deadfall (which is a sort of split trunk affair). 
Well worn & wet trail leading up to the house from water indicates much recent work. Some beaver work found perhaps $\frac{1}{4}$ mile above shack, this is a tremendous extension since last summer. Left at 3:30, wind still strong

Aug 26 but no clouds. Upper Colony 9AM. Windy, U. colony still from SW. Many cirro-cumulus moving. 2 chickadees chasing each other in Wyethia. Wright or Traill's flycatcher perched on dead limb a couple feet above my head. Asp. reprod'n good ^{at} from flash tree vicinity from stream at least 50' upslope. This doesn't jibe \bar{c} T.I. Storer's notion that the beaver are halting or depressing asp. reprod'n. As a matter of fact any "clearing" operation should favor aspen invasion or maintenance. Main dam just covered \bar{c} new logs & mud. First downstream

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Aug 26 Sage Hen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

U. Colony

loop greatly expanded downstream. Much fresh work on next higher dam. Set traps at 4. Arrived on seat 6:10, 7:05 large beaver swam down from below deadfall dam & dove into lodge. Acted as if R. forepaw injured. 7:25 beaver appeared in pond, swam over to spillway where my trap was, hesitated, swam back a little, floated, swam over to another spill way, to cross & disappear downstream. 7:40 small one app. in pond, swam toward S. side, fed, entered lodge, left lodge & approached spillway trap but then turned & went S. along dam. Heard but didn't see another one dive into lodge. 7:50 a small one seen swimming under-water to lodge. 8:05 beaver left lodge & swam over to the trap a couple of times and swam right over it! but it didn't go off. Getting very dark. Think trigger had slipped & fallen over a little so that he didn't strike it with his foot. Also heard what ^{may} have been beaver "calls" - a hybrid between a cry and a moo. Left at 8:10 & checked traps. No luck, set hooks.

Aug 27 More cirro-cumulus clouds & a fair SW breeze. Heard 2 or 3 nutcrackers at 10 AM in tall pines of N. side, saw 2. Began marking trees and noted where beaver went 60' up slope past a dozen 2-inchers and others of different

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Aug 27 Sage Hen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

U. colony diameters to cut a 2-incher. A few scattered cuts as far up as quail nest isle. Twin pine dam loaded c fresh maint. material. Marking chart

D	X
1	
2	
3	
4	
5	
6	
7	
8	

I afternoon mapped in detail. 6 PM Robin-size grosbeak (Pine) lito in l pole 15' away & began to sing doo-du, dit-doo, etc. Head and breast rosy, rump pink, rest of body

grayish. Bill large. 8 PM, coyotes howling across creek & down a little. Had ^{re} set traps earlier but checked them after dark &

Aug 28 caught nothing. Said out aspen sampling strips most of day. In afternoon took two photos from a rock just downslope from the large rock at the NW corner of the rocky slope where so much cutting has occurred. One shot, E, of the cutting and one, SE, of the willows. 3 PM

took sample A: upslope from house asp & sub marked A

	1	2	3	4	5	6	7	8	9	10	
Total	2	0	8	1	3	0	1	3	6	0	= 24
used	1	0	0	0	0	0	0	0	1	0	= 2

Sample B: upslope N from asp on island E a broken top

T	4	1	2	0	1	3	2	0	0	0	= 13
U	1	0	1	0	0	0	0	0	0	0	= 2

Sample C: upslope N from asp. stump 10' E of symmetrical (Sta #24)

T	3	2	0	1	4	2	4	0	0	0	= 18
U	3	1	0	1	2	2	0	0	0	0	= 9

Quit at 5 PM. Wind high all day; weather threatening. Set traps 6 PM at small dam

see explan-
atory note
p. 228

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Aug 28 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

U. colony opposite upper end of rocky slope. 8 PM thought I heard it go off but didn't check until 9 when I found small kit (about 10 lbs) marked H web + clipped fur on nape of neck.

Aug 29 Beaver has cut off another section of the tree felled about 60' from my tent. Every night so far he's cut off one more section. Last night he also felled a 2" asp. 30' from the other tree. 7:20 AM. heard coyotes about same place as other night. Continued exp. samples

Sample D: just E of sta. #15, N upslope from 3" asp.

I	8	5	5	9	12	6	2	12	1	4	= 64
U	0										= 0

Sample E: N + upslope from 2" asp about halfway between obs dam + next lower, + 5' E of large, weathered stump.

	1	2	3	4	5	6	7	8	9	10	
Total	12	14	8	5	8	1	4	3	6	3	= 64
Used	4	2	0	0	0	0	0	0	0	0	= 6

Sample F: flat, marked rock just E of Sta #49 S, upslope to 3-rock monument, each beeled just N of tremendous rotting log.

Total	4	3	6	2	0	6	0	7	8	5	= 41
Used	0	1	1	0	0	0	0	0	0	0	= 2

Sample G: upslope + S from 3" asp stump 8' E of dam stump (SE corner of dam) to beeled rock on 70' mark. Quit 12:30

Total	17	9	2	0	5	2	1	0	0	0	= 36
Used	2	0									= 2

Saw chick -

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Aug 29 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co, Calif.

u. Colony area at edge of pond; came to within 3' of me before seeing me. Hear them a lot. also saw Empidonax & flicker. Willow samples.

Strip "Z" from 3" asp. stump at NE end of dam to yellowhead nail in willow clump just below dam.

Strip "Y" from same stump near sta. #24 that sample "C" for asp started from, to marked wooden stake on pt of land between & below 2 spillways & dam above deadfall dam.

	0	25	50	75	100	DEAD
Y						32

Began to rain 4:30. Reset traps. Willow strip "X" from base of sta 51 to lettered yellowhead nail 3' S of 60' vertical gray snag which is 70' SE of OBS tree

	0	25	50	75	100	DEAD
	36	0	0	0	0	27

Checked at 9 PM & caught large beaver at same place kit was caught last night. Marked & scissored & punched "B" web. Rained most of night

Aug 30 7:20 AM. Heard coyotes much closer. 12 Noon Took photo #4 on pack 50, f/11 of willows along section Z from black P on seat bridge log. Scared.

Sept 23 mallards from pond. Little Truckee R.

8:30 AM, opposite Ever fish-pumping sta. #1. Watched imm. Cooper's hawk perched in tree 40' away for several minutes. This was within 25' of willow-choked stream bottom where I briefly

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Sept 2 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

~~H. Colony~~ examined some fresh beaver workings. Mr. Ever says there are lots of workings upstream away. Also

L. Colony saw a kingfisher. Lower Colony 1:30

PM. Brought in all my gear + set up camp at S side of pond. Weather hot. Saw kingfishers, creepers. at 5:30 set my

Sept 3 traps. Got up to check traps - no luck.

Spent most of day mapping, resetting

Sept 4 traps in late afternoon. No luck.

Continued mapping until 6. Set both traps. Watched beaver working in main pond at 7. Checked traps at 9 but no luck. Weather has been hot all day - clouds in afternoon. is appearing by eve. Warm enough to have left traps set all night but I didn't.

Sept 5 Continued mapping most of day. Took shot of sta. #24 (balanced stumps) 50, f/5.6. 7-7:30 PM watched 2 beaver at main pond. A half-grown beaver swam aimlessly around NE corner of pond, one almost climbing clear out onto the shore near sta. #1. a couple of times it surfaced within 4' of me as I stood on the bank. Paid no attention to me. Reset traps. Night was overcast at first.

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Sept 6 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.
L. Colony 7:30 AM. Checked traps & all Jones & Wick Gird
who'd arrived late the night before and found
a "1 yr old" in the lower trap. Tried 2 cc. sod-
ium amytal but this had little effect. Putting
barracks bag over head seemed to calm it
as much as anything. "sexed" it & also &
Wick's help & think it was a ♀. Marked it
with a safety pin in nape of neck and by
punching "D" web. Photographed it & re-
leased it about 8:45 AM. Marking
schedule

	Old Colony			New Colony		
D	X	L		X	L	
1						
2						
3						+ see line 23, p. 148
4						
5						° see line 17, p. 156
6						

Weather warm, sky overcast, fish welling up
in pond, jays active. A 2" asp has been
cut uphill from my camp and is about 200'
from shore. The new lodge going up
way upstream from main lodge is now
slightly higher than the topmost of the
two logs back of it. On Aug 25 this
was only about half its present height.

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142A

Sept 6
L. Colony

Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.



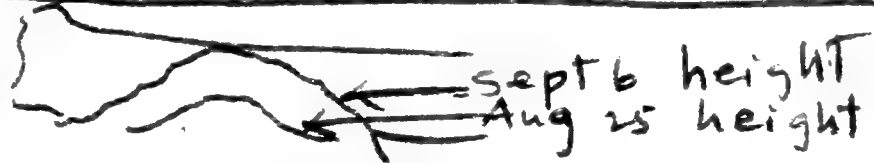
Young beaver in trap at Lower Colony

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Sept 6 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

L. Colony



Somer. active
damming at pond

just below shack. At the pond just below the shack the poles should be photographed now before they die or a c.f. for later on. This is the same colony as the new lodge. Flamed quail in same willow clump as last time, but didn't

Sept 8 flush. Finished 2 PM. Main camp
Main camp 8:15 AM. Coyotes barking, loudly from corner of road & timber SE of camp.

U. colony

Eased over that way but they stopped suddenly and I saw nothing. Upper colony 10 AM. Weather warm & a few thin cirrus clouds. No more work done on the log. Felled near my camp on last visit 9 days ago. 10:10 small Cooper's hawk flew over my head in thick aspen grove 30 yds upslope from lodge, lit in asp 10' above ground & 25' from me. Made a few sharp notes in flight. Took off after a minute. Marking schedule:

Lodge-plastering has begun.

Some more cutting activity on NW slope. One lone tree near

end of the deadfall dam has wet chips at its base. Big asp near sta. 24 that was just about down on last visit, is now down.

D	X	L
1	I	
2	II	
3		
4	II	I
5		
6	I	
11	I	

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Sept 8 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

U. colony what might be beginning of a lodge was noted just above dam where I caught the two beaver. Willow possibilities: just above scarbark, near 49, Bedard's spot. 11:30 AM. Peromyscus jumped from root of Bedard's deadfall to water, swam across 10' of water to shore, then jumped off into brush. Strip W from high cut asp. on isle above lower pond to stake near marked dead log on S side near upper end of Wyethia.

♀ Tolmie warbler lit in alder 6' away while I

% USE							Dead	T
0	25	50	75	100				
								28

was sampling, clipped & left. Took shot #5 on pack at 211 at 1 PM from $\frac{1}{3}$ way along dam of a willow clump. also took color shot of same.

Strip V from slanting gray log 40' upstream from OBS to big charred stump on point in lower pond

% USE							Dead	Total
0	25	50	75	100				
								31

Took black & white of aspens from roots of deadfall, nos. 6 & 7 on pack, 1:20 PM, 211 exp. Color shots also on Bodsey. Another color shot 24 exp. at 1:30 PM from two logs near photo tree of house & aspen

Sept 9. Supply. Left 2 PM. Lower colony 10:30 AM.

L. colony mapping c Bob Hoffmann. 12:10 PM, took color shot of dam looking NE from old burnt stump in pond in between #18 & #16 and 25' E of

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Sept 9 Sagehen Creek, 3 mi. NW Hubart Mills, Nevada Co., Calif.

L. colony the line connecting them. 12:30 saw what maybe Ind. warbler in fall plumage in willows. Breast streaked, chin light ruffy.
2:45 PM Took 2 color shots from 2' of asp.

Sept 10 downstream. Spent rest of day mapping.

→ Rockslide colony 2 PM. Took asp. samples.

R. colony Sample A: from sta # 4 upslope to B sta. Strip is E of the line.

	1	2	3	4	5	6	7	8	9	10	T
Total	5	4	10*	1*	0					→	20
Used	5	3	10°	1°	0					→	19

while samples corrected to 15 & 4 in 1954, see p. 238 *corrected to 9 & 3, see p. 238

In these two cases, all shoots 1" or more diam.

were counted as "trees". Sample B: from about half way between 11 & 16 upslope. (Upslope stake set at 45' mark).

amended
by 1954
tally, see
p. 239

	1	2	3	4	5	6	7	8	9	10	T
Total	7	3	11	0						→	21
Used	7	3	11	0						→	21

4:30 PM,

Earlier in day (12:30 PM) saw water ouzel along creek at main camp. Lower colony

Sept 11 L. colony 2:30 - 4:30 PM. finished mapping. Weather

Sept 12 overcast. 9:30 AM. Asp. samples. Sample A: from numbered stake 4' down stream from 2' deadfall which is just below a dam, up to a pitchy stump 50' W of sta. AA.

	1	2	3	4	5	6	7	8	9	10	T
Total	1	3	0	3	0	12	0	0	0	0	19
A Used	0									→	0

Sample

B: from foot of leaning 10" l pole on shore opposite pt EE, upslope.

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Sept 12 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co, Calif.

L. colony	B:	Total Used	1	2	3	4	5	6	7	8	9	10	T
			4	1	1	0	1	0	0	5	0	4	16
			3	0	1	0	—					→	4

Sample C: from 3" stump 10' upstream from dam which is 4' upstream from Sta #18

	1	2	3	4	5	6	7	8	9	10	T
T.	9	5	2	6	3	3	6	1	0	0	35
U.	5	1	0	1	0	1	2	0	0	0	10

1 PM. Took picture #8 on film pack looking NW from top of old stump (Sta #23) 211 exp.

Sample D: running through + 10' E of T Sta. "I". Also from stake on shore 8' E of #25

	1	2	3	4	5	6	7	8	9	10	T
Total	2	9	4	1	0	2	5	0	0	0	23
Used	2	8	4	1	0	1	5	0	0	0	21

Sample

E: running

from a pt. on shore opposite S but about 4' downstream to 10' farther down.

	1	2	3	4	5	6	7	8	9	10	T
Total	1	0	0	3	0	0	0	2	2	0	8
Used	0	—								→	0

Sample

F: run-

ning from a pt. 8' up from Sta. 41 + 2' down from Sta 41 to about 1' up from U.

	1	2	3	4	5	6	7	8	9	10	T
Total	1	0	1	2	4	6	5	0	4	5	28
Used	0	0	1	2	3	4	2	0	0	0	12

Willow samples: Sample 2: from big rotting log extending into pond just up from M, across to stick 8' SW of two 10" pines next to bridge log.

CLUMP	1	2	3	4	5	6	7
% USE		25	40	10	10	0	
No. Twigs cut		2	11	4	1	0	
Av. Diam.		3'	4'	12'	3'	5'	

Hall
1953

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Sept 12 Sagehen Creek, 3 mi. N.W. Hobart Mills, Nevada Co, Calif.

L. colony Sample Y: from 6" dead asp. in water one foot from shore & 15' from Jim's #7 stake, NW to 12" dead pine.

Clump	1	2	3	4	5
% use	75	100	75	75	25
Twigs cut	9	23	22	27	10
Av. diam.	3'	10'	8'	10'	10'

Sample X: 2" stump 10' NE #23 to point on dam

10' beyond #22:

Clump	1	2	3
% use	10	50	10
Twigs cut	4	3	2
Av. diam.	8	4	9

Sept. 13
R'slide
colony

Rockslide colony
2 PM. Took shot #19 of mid colony

from top of marmot rock 28 sp. Asp.
Sample C: from stake on shore opposite sta #23, upslope to stake in briar brush on edge of asp. Limit 25' W of 15" pine.

Consider-
ably changed
by 1954
dolly,
see p. 239

	1	2	3	4	5	6	7	8	9	10	T
Total	3	3	4	6	3	3	4	7	7	5	45
Used	3	3	4	5	3	3	3	3	1	1	29

2:30 PM

Zapus

jumped in amongst boulders, grass and dead asp. stumps of sample C, 12' from shore. Left 3:30 PM. Roadside colony 9:10 AM

Oct. 4

Roadside
colony

Weather cold (40°), hazy. Commotion in some pools just below the first dam & downhill from stump of log where camera was cached. Saw two 10" trout (browns) chasing in and around this pool whose bottom is silt-covered. Next to clump of sedges was a circular area of gravel which had evidently been fanned free of silt

Hall
1953

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Oct 4 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

Roastside by the Trout. Didn't get good look at trout but noted a little red on or near adipose fin. Also white dorsal fin border. Water about 6" deep here as a guess. Willow yellowing a little in places but the asp. here hasn't turned 'tiro' on high slopes between here and Reno it has, as was evident yesterday in plane. 9:35 AM heard nutcracker + saw buzzard.



L. Colony Upper end lower colony. Asp. beginning to turn on slopes but not in creek. Cutting schedule for new part of L. colony:

D	X	L
1		
2		
3		
4		
5		
6		
9		

see line
20, p 156

of wet, mud-covered grass and debris at uppermost cutting site where beaver have been hauling sticks to water. These piles were on shore 2' from water + smelled faintly of castor. Deer tracks more numerous on trail beside creek than ever before. Add two 2-inchers to last count. New dam just downstream from the log cabin is in much better shape + repair now than it was last Sept. Will have to go over each asp. strip sample to determine diam. groups for future extrapolation. 11:10 fox sparrow on low dam. Cutting schedule for

Hall
1953

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Oct 4 Sagehen Creek, 3mi NW Hobart Mills, Nevada Co, Calif.

L. colony "old" workings: ~~D X~~ →

	D	X	L
1		III	
2	III	III	
3	III	III	
4	III	III	I
5	III		
6	III		

Pond loaded: little frogs. Beaver
castor on the air. Couldn't get out
to lodge but it looks no different
than last time from shore. Weather hazy
but hot in afternoon. Practically no
cutting on S side, old or new parts.

The ^{new} lodge started this summer is now really
a lodge! Shows a great deal of work & the
large dam below it has been built even
higher so that water is now backed up
to E side of lodge. The lodge is heavily
newly plastered, esp. on E side. Last night's
work for sure. On shore directly opp shack
is regular trample-ground where deer
have come to drink; never saw anything
like this many tracks here before. 2:50
chickaree crossing log where we usually

Roadside cross just below main dam. Roadside
colony Colony 3 PM. watch trout dashing around in
same pool they were in this AM. Am convinced
they are brown, not brooks. They are 12' long
or close as I could guess. Upper Rockslide

U. Rockslide Colony 3:30 PM. Main dam & house looks

Nov 28 same as on last visit. Just upstream
from Buzzard knoll (opposite the spring
camp) ^{10:05} AM, found coyote scent post

J. G. Hall
1953

Nov 28 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co, Calif.

Opp. Spring Canyon at base of 12" l pole 30 yds W of a giant, yellowed snag. Numerous old & new tracks. Marked the tree w 2 blazes. Stu shot a creeper from 12" l pole in fairly open stand. Much coyote sign - 3 parallel sets of tracks in one area on S side of stream at lower end of kiln mdw. Picture of Stu & Bob at 10:40, exp 24. Red-tail perched atop 70' l pole in U. end Kiln mdw. Stu shot T. solitaire from asp 30' from stream 100 yds upstream from the ford. Gave a phrased song, a little robinoid tho' shorter.

U. Colony U. Colony 12 Noon. Pond has v. thin ice in places, none in others. Lodge has lots more sticks added to top and an excellent food cache of asp. logs just outside. Food cache better than last year's. Good deal of cutting around pond & the new little dam about half way between lodge & photo tree has now flooded some more area on N side. Impression is one of cutting of large trees. 12:00 noon took shot of house, tracks on ice and food cache exp 15.6. 12:10, took shot of lodge & food stores from "P" on log leading to perch. (This is a photo point) Exp. 25.6. at 12:20 Two shots of beaver scats & crossways, one

J. G. Hall
1953

Nov. 28 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.
U. colony at 13.5, the other at 15. ~~Fond has~~ 12:35
shot of beaver tooth-marks on fallen asp 15.6.

Cutting schedule:

The upstream dams have been enlarged but aspen cutting hasn't been carried appreciably higher than it was last fall.

Some cutting of $\frac{1}{2}$ "

Ceanothus on S. side.

D	X	L
1	11	
2	25	
3	21	2
4	15	1
5	8	1
6	5	1
7	3	1
8	4	2
9	2	1
10	1	
11	2	1
12	1	
13	1	
14	1	
21	1	
15		1

Chickadees feeding in + around l'poles. Considerable Ceanothus cutting by crossing tree on S. side. Tremendous feasting area of porcupines 25' down from my old tent-site. Littered c fir + pine branches + lots of droppings so fresh they were still slippery. In grove of red firs and both pines. More Ceanothus use farther down and the ground was trampled for in an area of 6' in diam; just to get ~~at~~ the Ceanothus. Aspens immediately adjacent were untouched. On the N side a new dam 10' long has gone up across the N. channel where one of my willow strips started. This is above BS tree + below main dam. Still another new dam 25' farther up. 3:10 PM, Robins

J.G. Hall
1953
1954

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Nov 28 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co, Calif

U. colony waxwings and a solitaire (giving a single call note) seen feeding on juniper berries.

Nov 29 Roadside colony 10:15 AM.

Roadside colony Waxwing in tall pine, creeper farther down in l' pole. ^{Big brown still spawning.} Considerable new cutting of large aspen below main Roadside colony on "bend" of trail. New dams too - really thriving. Took shot of the lowest of newly-worked stand from path at 10:30, exp 24.5.

L. Colony. Upper end of Lower Colony. Took shot of the new lodge exp. 23.5 and a shot of streamside shack cuttings exp. 14 at 12:50. Cutting schedule.

"NEW" = UP TO OLD SHACK

D	X OLD (ON N SIDE)	X NEW	L NEW
1	HT HT III	HT HT	
2	HT HT I	HT HT	
3	HT HT	HT HT II°	I
4	HT HT	HT HT HT HT III°	
5	II	HT	I°
6	II	III	II
7		HT	III
8		III	
9		III	
10		II	
11		I	I
12		III	

see line 19
p. 156

Ter lodged added per note, p. 265

Feb 5
U. Colony

On way up heard coyotes on the N ridge. A yep or two at kiln mdw, whole chorus when at lower end of upper colony at 10 AM. 3 or 4 nut-crackers flying about among pines between ford + l. end of pond. Chickadees too. Lodge covered c 8" of snow everywhere but on the S. side which is bare. Not

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1953 and 1954 (part)

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153

Feb 5 Sage Hen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

U. Colony much cutting above snow. Lots of coyote tracks. Cutting schedule:

In a line between photo tree & rocky slope lie 4 three-inch stumps

D	X	L
2	11	
3	1	
6	1	
8		1 (Flash)
9	1	
11		1

plus one
1" (via
p. 201)

which weren't marked because they appear to be trimmed branches from a larger, felled tree covered by snow. Nearly by is the 11" listed as lodged since it was marked even though its stump was concealed. At very upper end of colony was one open section of stream covered only by a thin film of ice. It was about 30' long by 5' av. width:

Saw a 4" trout swimming here. Since this stretch is as shaded as stretch upstream and moreso than stretch downstream, both of which are covered \approx 2' of snow, it may be a spring-fed area.

10:45 took shot of lodge showing melted S-facing side, exp. 211. Flash tree has become lodged; shows about 2 recent bites but they had no effect on lodging it. Little total work; most of it centered about lodge. Snow crusted well enough for travel w/o skis or snowshoes - about 2' deep. Main camp, 5 AM. Coyotes howling across mdw from gaging station.

Feb 6
Main Camp

J. G. Hall
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Feb 6 Sage Hen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.
Roadside Colony
Left camp 8:50 AM. Clouding up a little \pm cirrus but cleared up by 10. Arr. Roadside colony 10:15 AM. Much more open water down here than above, in fact there is little ice here. Kingfisher called from dead l'pole, perched then flew upstream. Took shots of the upper, older lodge which is covered by snow, and the lower, newer lodge 50 yds downstream, which is almost completely free of snow. Esp. both at 10:25 for comparison. 10:45 New downstream extension of this colony noted last Nov. shows no obvious work since then. L. colony Saw no chips on snow. Lower colony (upper part). Much recent work & many tracks in snow at uppermost extension of the lower colony (down to shack). Quit at 11:45 & got back to camp by 2:30. Cutting schedule down to Shack:

D	X	L
1	"	
2		
3		
4		
5		"
6		
7	---	
8	---	
9	---	
12		

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March 26 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

Main camp 6:30 AM. Left for downstream colonies. About 0°F \pm a slight haze. Upper

Rockslide Rockslide colony 7 AM. Heard Pigeon owl calling about every 2 ^{secs} from high up on the south slope. The ~~Lower~~ ^{middle} Rockslide colony

has 3-4' of snow. Stream open but a thin layer of ice covers the ponds. Lodge near OBS has a melt hole from which rising steam was barely visible. Chickadees calling. $\frac{3}{4}$ mi. below Lower Rockslide colony a coyote track crossed the trail. 7:35 r.b. nut hatches calling.

8 AM. Williamson sapsucker calling. 8:15 a robin calling from top of a lodgepole just above Roadside colony. Log cabin 8:55, a big set of coyote tracks leading to stream from cabin. 9:05 Old section

Lower colony of Lower Colony. Weather calm & clear. Snow 2-3 ft deep; not much cutting evident. Main Lodge had an area 5' in diam on the S side on which all the snow had been melted off. The rest was covered \pm about a foot. Pond frozen over & snow-covered except for the extreme N & S ends of the pond where water was swiftest. Some parts of the S end of the pond were actually open water.

J. G. Hall
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March 26 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co, Calif.

h. colony Evidently most of the flow is here thru the S. end & this must have been original bed of creek before damming.

addition
of P 195
OK

Cutting schedule for old sect:

D	X
1	1
2	1
3	1

Virtually no cutting in the old sect. since last November. Cutting schedule for new section:

D	X	L
1		
2		
3		
5		
6		
8		
9		
10		

10:25 little ~~teeny~~ wren flitted across open sect. of stream from shelter of one overhanging snowbank to the other. About house wren size; tail short; a

"trip" note. Winter wren about only thing it could be. Chickaree perched in lipole. Very still. Fur gray & ears tufted.

Add following cuttings to last summer: 3 2-inches and one 6-incher. Add to last November: one 3-incher, a 4-incher and a lodged 5-incher. Add to Oct. count: a 4-incher & a 5-incher. Some fresh willow cuttings in pool between 2 dams (where there are a lot of fresh, big lodged asps) about half way between AA (the big rock) & 2 (the real long sight)). Also, obvious slides over both dams. Quite a few newly-cut 2" & 3" out on a spit inaccessible w/o hip boots. Directly opposite

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March 26 Sagehen Creek, 3 mi. W Hobart Mills, Nevada Co, Calif.

L. colony the newest lodge. Coyote tracks along shore at site of most active cuttings. asp. logs floating in pond of newest lodge.

at least 4 good sets of tracks showing where beaver have come out on snow to cut willow about 15' away. Started back

Roadside from shack at 11:30. Roadside colony 12 noon.

Song sparrow singing in willows; unident.

hawk flew by over top of knoll. White b. nut hatch calling while working a big jeffrey 20' from me. Rufous under tail coverts visible. Creeper in same tree 15 min. later. Halfway between

Roadside + Rockslide colonies 1 PM

heard but didn't see nutcracker

~~Roadside~~ calling high up S slope. Rockslide

colony 2 PM, several trails leading in snow to beaver cuttings about at downstream limit of asp. patch on the rockslide and 30 yds from water.

u. rockslide lodge has suggestion of breath hole tho' not as good as last yr. nor as that of middle lodge this year. Got back to camp by 3:10 PM.

May 15 Main Camp, 7 AM. Slightly hazy, v. little breeze. Most obvious songsters are white-crowned sparrows. Also in song: Chipping sp, junco

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May 15 Sagehen Creek, 3 mi., NW Hobart Mills, Nevada Co., California

Main Camp. R. c. kinglets & pileolated warblers. Robins also seen. Scared dipper from nest of moss on side of u/water tank. Ray Allen says it's been there for some time ^(1 mo.) and moss was fresh &

Roadside green when first put on. Roadside Colony 9:20 AM. Song sparrow singing in willows. ♀ hairy in dead lipole. Much new cutting on the "bend": fresh peeled asp. logs floating in ponds. Some felled asp. in small leaf. Down on lower end of bend a tremendous amount cut since last visit. Many new little dams. 10 AM. fox sp. singing from asp. twig 10' right above water. These "bend" cuttings don't yet extend downstream below where path loops right down to stream. Steller jay cackled & flew. Park-like stretch below bend has only willow & might discourage spread between Bend down- & Shack up-ward movement. Chickadee calling 10:10. Mt. quail calling from chaparral. Cutting going well above shack where it's been rapid in winter, snow permitting. New observation: a tree felled before its leaves were out (snow was on ground) has become half leafed-out now, just as well as those standing. The leaves are $\frac{3}{4}$ " long. A dam 3' high

May 15 Sagehen Creek, 3 mi. NW. Hubart Mills, Nevada Co, Calif.

L. colony going up 25 yds. up from shack and has diverted part of the stream N so that there is now a 3' wide stream going between the shack & cabin where none was before. 10:40 Warbling Vireo singing from asp. overhanging stream. Has a churring scold note. This area from shack on to & a little below AA is the most active section. 2' garter snake under asp. logs 15' from stream. Main pond 11 AM. Not much evidence of recent cutting in immediate vicinity yet a considerable pile of peeled asp. logs floating near lodge. Top of lodge has some fresh asp logs, one ϵ leaves. One 6" and a 7" tree were cut near lodge in main pond recently. 11:30 W. b. nuthatch foraging on l' pole just below dam. A few cuttings below main dam but insignificant. Cutting schedule:

Red-paint from here on

additions of p 193-4 OK

OLD (sect.)			NEW (sect.)		
D	X	L	D	X	L
1			1		
2			2		
3			3		
4			4		
5			5		
6	-		6		
7			7	-	
8			8	-	
10			10	-	
11			11	-	

11:50 chipmunk scolding from branch 20' above main pond in dead l' pole. 12:20 fox sp. singing in

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May 15 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.:

L. colony willows below main dam. Many chickadees calling nearby. Two snow plants 5" high. Remains of a yearling in poor condition found scattered over 30' circle at water's edge half way between 2 & 1A. Several large asp felled out of reach in pond below shack. Left 2 P.M. ♂ r. b. sapsucker in l' pole between shack &

Sagehen mouth bend. Just above Sagehen's mouth at Little Truckee R. 3 P.M. Heard about beaver dams here from Al Jones on last field trip of the Ichthyology class and I found 4 here. They're made entirely of willows - no asp growing in sight.

Took shot ^{no. 1 on pack.} at 3:30 P.M. of lowest dam which is about 1' high. Also one of heavy willow use between 2 dams. 3:50 P.M. came on dead buck caught on some willows half-way across creek. Right flank torn open, intestines hanging way out. Rubbing $\frac{3}{4}$ - 1" long P₄ three-cusped, one molar ~~coming~~ ⁱⁿ going, 2nd coming in, no sign of 3rd. 3 P₄ & 1st M in in upper jaw, no more evident. Coyote tracks in mud along S shore. Deer + evidence appeared fresh. Pulled an inch-long caterpillar like worm out of his mouth. yellowish-white, segmented.


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May 15
Sagehen
mouth

Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

Scouted upstream away but found no more than the four dams, all below the "moraine-ish" spit near where the deer was found. Several spots where something has been chewing off bark of stream-side l'poles. Could be beaver.

Nest of song(?) sparrow in grass at base of willow. 7 eggs, light green background - reddish-green spots.  in a sort of band. Also seen down here were: red-wing, brewer's, killdeer, cliff swallow, scelopors & frogs. Left 5 PM.

At Hobart a mt. bluebird + ~~ammery~~ ^{audubon's} warbler, latter flew to willows. ~~It had~~

May 16

Clear & calm. Spring camp 8:20 AM. W. tanager calling from top of a Jeffrey. Then a pewee-sized flycatcher replaced it. Two marmots, one about beechey size, the other full-sized were on the W-most Rockpile just uphill & a little W of the spring. Jumped a mangy looking doe from foot of the rock pile. Then saw 3 more marmots on the same pile bringing total to 5 in view at same time. They look $\frac{1}{2}$ grown. 8:35 heard first pewee at Kilm Indw. Also a nutcracker, a beliding

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May 16 Sagehen Creek, 3mi. NW Hobart Mills, Nevada Co., Calif.

ground squirrel & Williamson's sapsucker.

U. colony the ford. Heard mt. quail saw several jays above
Upper colony 9:15. Asp not yet
in leaf up here though they were below.

Willows in small leaf. Marking schedule

P	X	L
1		
2		
3		
4		
5		
6		
7		
11		
12		
15		

Good deal of cutting about 75 yds
below lodge & on N side about
where I camped last summer.

Many of stumps cut 3' off ground
when snow was fairly deep.

Main pond high with a new
dam between photo tree & lodge & has
diverted quite a stream around N side
of lodge so it is now surrounded by
water; seems in good shape. On S
shore opposite the dam which is one up
from where I caught the two beaver is a
pile of dead sticks close to water's edge.

Conceivably could be a caved-in &
repaired bank burrow. Left 10:45.

Below main camp near deer-hunter's &
fisherman's camp where stream is right
next to road a 5" asp was cut
recently. Needham had to throw it off
road a week ago. This is where a
little cutting occurred hereabout
the same time last year.

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- May 16 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.
R'slide Rockslide colony (upper) 12:30. Main lodge still has several sunken food sticks lying on bottom plus some fir cuttings. A fir cutting on ^{dam} for upstream. Also some cutting of 1-2-3 yr old sprouts. Dam a lowest part of colony built last higher than last summer. & has backed water up to cover area where I caught beavers with 6" of water. Left 1:05.
- May 24 Berkeley, Left 6:15 with Ward Russell & Frank Williamson and crossed Sierra via Sonora Pass which had only been open one day. Little snow for this early. Over to 395 & south to Mono lake by mid-afternoon. Stopped at dump for an hour or so to collect 4 Calif. quills for brood patches. All had them tho' some barely discernible. On down to Bishop where we stay -
- May 25 ed all night at Wilton. Left Bishop about 10^{AM}, went N on Route 6, crossing S of Excelsior Mts & N of Whites via Montgomery Pass, 7123' turning S about 25 mi. E of Nevada State line. onto Route 3A into Columbus valley, then on down into Fish Lake Valley.

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May 25 Trail Canyon, 8900 ft., White Mts., Esmeralda Co., Nevada
20 miles to Chiatovich Ranch by noon. Inquired at ranch about Chiatovich, Middle & Trail Canyons. Chiatovich being irrigated so impassable now. Met Hong Powell of Geog. Dept. who was headed up Trail Canyon in order to climb Boundary Peak so decided to go up there with him. Mostly sage in valley but as we ascended came into Pinyons (some showing porcupine work) a very little aspen, mostly sage and, in the stream course willows and birch Betula fontinalis as well as wild Rose. These three grow so thick that crossing stream virtually impossible in many places. Picked a campsite about 200 yds below the end of the road in a grassy area. Canyon walls rise sharply on both sides here. Vegetation on N.-facing slope mostly sage & a good deal of Bitterbrush and some singleleaf Pinyon just below camp, none above. Higher up on slopes Mt. Mahogany occurs. Some Pennyroyal in the ravines. After setting up camp we set

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May 25 Trail Canyon, 1890 ft., White Mts., Esmeralda Co., Calif.
out 30 Museum specials about half in the
sage & some along stream course. It's
been windy here all afternoon & evening.

May 26 Checked traps 5 AM and found 20
Peromyscus maniculatus sonoriensis,
one Sorex palustris and one Lagurus
curvatus. Lost two traps, a couple
were sprung. Several Peromyscus
were badly chewed up, presumably
by others, possibly by weasels. Peromyscus
all caught in sage. ~~but~~ ^{but}
the Lagurus was down at very edge
of stream in a shrubset. A couple of
the traps had been set in rocky out-
crops but no P. crinitus caught.
Started up canyon for birds about 7.
High wind from W. all day. Empidonax
seen near stream; white-crowns sing-
ing loudly all along stream course.
Much horse dropping all over the place,
in camp as well as along stream
farther up and often it is left in
a pile a foot high & obvious "strat-
ification" as to age. Like coons in
Tilden Park. Saw 2 "wild" horses on
N-facing slope, 20, including
2 colts, on the S-facing slope

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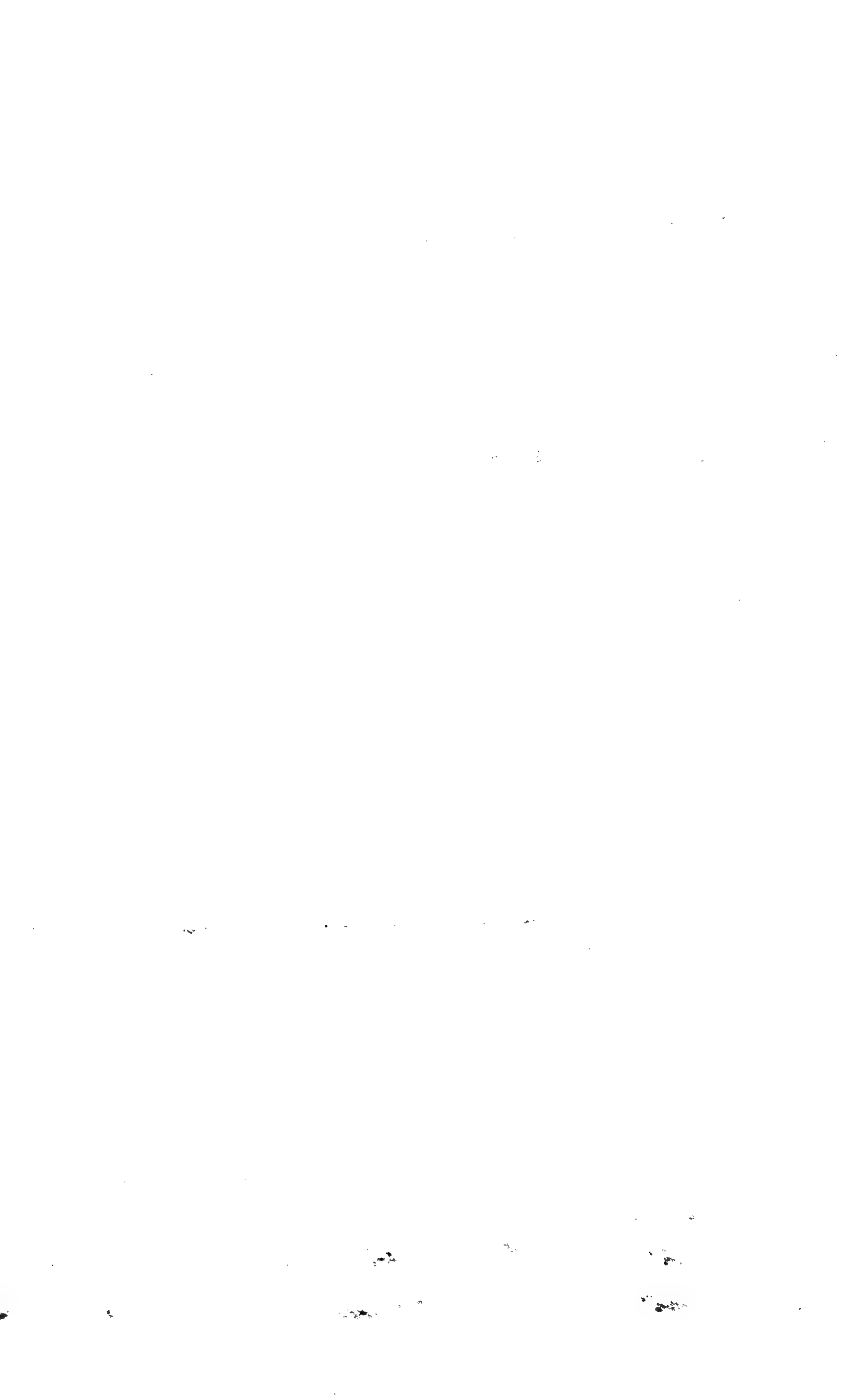
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May 26 Trail Canyon, 1890 ft, White Mts., Esmeralda Co., Nevada
high up the hillside feeding on
the bunch grass. A good patch of Mt.
Mahogany in tree stature about $1\frac{1}{2}$
miles above camp. Further up scat-
tered timber pines occur. Mt. Blue-
birds, Oregon juncos, flicker seen as
well as Steller jays, one of which I
shot in willows. About 2 mi. above
camp where there is a 100 yd or so
gap of meadow before more willow
grows farther up, I flushed what
probably was a sooty grouse and
definitely flushed one in willows
about $\frac{1}{2}$ mile above camp when I
shot at a jay. Robins seen. Lots of deer
sign but saw no deer. A couple of
cow skeletons in meadow areas.
Heard a couple of Clark's Nut-
crackers. Back to camp by 11:30.

Clear all day, wind died down in eve-
May 27 ning. Clear, windy but not as bad as
yesterday. 5:30, went up the sage slope
just N of slope and then up the rav-
ine just beyond it. Finally went down
creek for about a half mile. On
sage slope sage sparrows, Brewer's
sparrow, green-tailed towhees and got

May 27 Trail Canyon, 8900 ft, White Mts., Esmeralda Co., Nevada

one view of what probably was a pileolated warbler. Shot ♂ g. t. towhee. Crossed over to the dry ravine where, besides sage there is some mt. mahogany and piñon pine higher up. Saw several Euphonia that had the 'chu-reep' call note. Sage sparrows also singing over here. Song starts like a step-wise pine siskin changing over into a song similar to a slow junco's trill. Scared a cottontail & several chipmunks. The Clark's nutcrackers very abundant & vociferous. A pewee and a v. g. swallow plus a spotted towhee. A downy woodpecker and a pileolated warbler. One nutcracker came to a little seep about 30 yds away while I sat, and took a drink, flew away & came back for another. A couple of 4" Sceloporus dashed under rocks & sage. Two old shed antlers & a cow skull. Scared a mourning dove from a big willow at camp. On faint down creek shot pewee and had a good look at a pair of sparrow hawks near the rock outcrop just across creek from camp. Thought



27 May Trail Cañon, 8900ft., White Mts., Esmeralda Co., Nevada

They might be nesting in cavities in the rock but they didn't go in any in the 15 min. I watched. In evening set 8 traps out in sagebrush bordering the stream, 4 ^{feet} on the very edge of the stream ^{Heard P. on willows, took one but couldn't find him} for shrews. Got one Peromyscus

28 May

last night before bed time + 10 more when traps were checked about 5 AM. Two were sprung + bait gone. Ward Russell says he's never seen Pero-
myscus so abundant anywhere. at 6:15 took shot of our camp in color. Hunted along stream bank from 6:15 to about 10 this morning, all up-stream from camp. Weather clear + calm all morning but birds ^{however} usually ^{trousers} quiet all morning. Birds in willows: Tolmie & Pileolated warblers, Empidonax, chickadee, Robin, Steller jay, fox sparrow + white-crowned sparrow. Shot the sparrow in willow clump. Began to cloud up early in afternoon and around 5:30 rained just a little with a flurry of snow. Cloud cover in evening - relatively warm.

29 May Packed up and moved camp to Indian Creek ^{farther} south on the East Side. On way

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29 May, Indian Creek, 7400ft., White Mts., Esmeralda Co., Nevada
we stopped at M^r Nell's Ranch. Saw
about 4 or 5 cedar waxwings here and
a couple of Bullock's Orioles. Pitched
our camp in S end of Post Meadow at about
7400ft. Vegetation here similar to that
in Trail except that there is consid-
erable more open meadow and sev-
eral "swamps" of very large willow
in which one can walk without get-
ting hopelessly entangled in Rose.
Plenty of rose also, however in other
sections. Set 10 traps in early eve
in sage & along stream just up from
camp. ^{noticed red tail hawk in late afternoon} later we all tried to get a
poorwill which was calling sporad-
ically. First noticed presence when
one lit like a big moth in a
bare area about 15' from our
camp fire. The calling was not
persistent, however, and we
had no luck shining.

30 May, Caught 5 Peromyscus m. sonori-
ensis and 1 Poor-Will! The poor
will, caught in the trap set
nearest our camp, along side the
stream, was found lying or rest-
ing on the ground about 3 ft.

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30 May Indian Creek, 7400ft, White Mts, Esmeralda Co, Nevada
from the trap. Some of its feathers were in the trap, though. It permitted me to pick it up so must have been injured. Left camp at 6 AM to hunt the willow "swamp" just upstream from camp. Weather cool, breezy with a very slight haze early. Jays abundant & noisy. House wrens most persistent singers. Shot a ♀ flicker, ♀ Lazuli bunting and a ♀ wood pewee. Hairy or downy woodpecker drumming persistently but was unable to get a good look at him. Towhee & Pil. Warblers, Cowbird, spotted Towhee, ^{robins} orange-crowned warbler and chickadees found here and a Poor-will called twice from the rocky slope across the canyon. This particular area seems much richer in bird life than did anything in Trail Canyon. In eve. set out 20 more traps and watched Ward set out a bobcat trap, baited with a jack-rabbit. Later in eve. Ward shot a saw-whet owl by flash light in the swamp.

Creek
31 May Indian Canyon, 7400 ft., White Mts., Esmeralda Co., Nevada
No bobcat in trap. Checked mouse traps (29 in all) & caught 16 Peromyscus m. sonoriensis, 2 Microtus montanus and 1 M. longicaudus which Ward calls M. mordax. Started hunting a little after 6 in the Willow "swamp" again and found nest of spotted towhee in grass at base of sagebrush about 40' from edge of swamp. It had three eggs, spotted & reddish brown. House wrens again singing loudly and I located nest of one ⁱⁿ with a hole in a willow about 15' above ground. Noticed an adult woodrat, M. lepida in debris of fallen willow not far away from wren's nest. Frank says my Downy is a hairy. We both got shots at it & missed. Shot a Steller's jay. They're very noisy here cf. to Trail Canyon. Black-headed grosbeak singing several times from top of willow near swamp. Cowbird and cedar waxwing each passed through as did a ♂ W. Tanager. Flicker nest located by Frank yesterday has young about ready to fly, judging by noise they make.

- 31 May Indian Creek, 7400 ft, White Mts, Esmeralda Co., Nevada
Left about 9 to start skinning. Took shots of camp + Pinon Pine from slope SE of camp and then skinned. About noon caught yng. Neotoma lepida in food box. Weather today has been cloudy-bright and windy. at sunset we noticed two birds of about crow size harassing a golden eagle out over the Fish Lake Valley. At 6 I started up the road above post meadow about a mile from camp. stuck fairly close to willow thickets but going into clumps of pinon occasionally. The whole area seemed much quieter this morning than on previous ones. Black-headed grosbeaks, robins, spotted & green-tailed towhees, mt. chickadees, oregon juncos, pil. warblers and an unk. warblers were seen here. Crossbills flying overhead once and a mourning dove called from the rocky N. hillside. Saw broad-tailed hummers. On way back about 8:30 got a Uta stansburiana & saw several Sceloporus. In willow swamp heard & saw jays, shot a pewee and a house wren. Back

1 June Indian Creek, 7400 ft., White Mts., Esmeralda Co., Nevada
to camp about 9. At 5 I set out
the flash trap in the willow
swamp where some Peromyscus
used as bait had been taken a
couple of nights ago. In evening
I reset my line of 29 traps
and saw a yng saw-whet owl in
the swamp which Ward shot. The
poor-wills opened up better than on
any previous eve. This has been
a warm, clear day & evening.

2 June 7 AM. Checked trap line & caught
18 Peromyscus, 2 water shrews &
one harvest mouse. At 8, Frank &
I hiked down road about $\frac{1}{2}$ mile,
then crossed over to the S. fork
of Indian Creek. Weather very
warm - no clouds all day.
On way through the sage flats shot
a Cnemidophorus and a Sceloporus.
Went up creek bed for about $\frac{1}{2}$
mile and passed through some very
rocky cliffs on the N side - possibly
Ringtail country. Then hit a long
stretch of birch which extended
up to some mining bldgs about
another $\frac{1}{2}$ mile and beyond.

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June 2 Indian Creek, 7400 ft., White Mts., Esmeralda Co., Nevada.

Saw chipmunks all along the way but so far they've been just too shrewd to get a head on. Chickadees, hairy woodpecker and a flycatcher of some kind seen as well as Tolmie warblers ^{& fox sparrow. ~~seen~~ spotted towhees} at a pond formed by a dam at the bldgs. From here we climbed up a very steep little side canyon cut into the S. face of the main canyon. Probably went up 1500' or so from the Piñon + occasional juniper of the floor to some P. aristata and eventually P. flexilis near the top. On way up we frightened a medium-sized hawk (or owl?) fly from somewhere in the canyon wall over our heads & away. About 100 yds farther up we located a hawk-size stick nest stuck in a crevice of the cliff face but as far as we could tell, it had nothing in it. Back down got one more quick glimpse of hawk flying into piñons. On way back saw several Steller jays & robins. Back to camp at noon. In evening

June 2 Indian Creek, 7400 ft., White Mts., Esmeralda Co., Nevada

which was the balmiest by far we had so far, saw what our seen in Flicker-hole tree. Poor-wills abundant on meadow and I shot one by shining. Reset flash-trap though had no luck last night.

June 3 Checked flash trap but no picture - all bait but that tied to trigger was gone, however. At 6 I left camp to hunt downstream along the willows away from Frank but we soon separated. Birds unusually quiet this morning. Finally got a chipmunk, probably minimus. Then cut over across the S. fork to a small canyon full of pinyons on the N slope of that valley. No birds except two nutcrackers flying overhead. Chipmunks fairly common but wary. Left this and cut over to birch thicket just below the junction of the two roads. Here saw spotted & green-tailed towhees, heard black-headed grosbeaks and pileolated warblers. Saw Steller's jay and shot a warbling vireo. The Tolmie warblers are loudest songsters early in the

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June 3 Indian Creek, 7400 ft, White Mts, Esmeralda Co., Nevada
morning but are extremely secretive
Shot 2 Racrunner in the sage flats
on the way back. Arr. camp 9 AM. After
supper reset flash-trap & then watched
for Poor-wills till about 8. They are very
active as they were last night, one almost
alighting on my shoulder, but lit
on a rock nearby when I moved.
Uttered a series of "chuck, chuck,
chucks" and jumped up for an
insect and alit on same spot.
Later saw one flying and it glides
about a little; reminded me of a
miniature sparrow hawk in
silhouette! Day has been very
warm but breezy. Clouding up

June 4 ^{checked camera & it was fired - probably by accident}
Drove up to end of road going up S. fork
of Indian Creek, then started hiking
in from here by the trail at 6 AM.
Destination Cabin Creek, 10,500 ft., Mono
Co., Calif. A long pull thru mt. mahog-
any, P. aristata and then P. flexilis
to the flats above. Took approximately
1 1/2 hrs. On road before we started
our hike we secured 2 hen grouse
in the road. They each stayed in the road.

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June 4 Cabin Creek, 10,500 ft., White Mts., Mono Co., Calif.
ahead of the truck for 40 or 50 feet
before flying; Ward thought they
had chicks nearby. Once up on
the flats we had wide panorama
to White Mt. Peak to W. & Boundary
Peak to N & others we didn't know.
Vegetation was dwarfed sagebrush
amongst which were many white
red droppings of sagehens. We saw
no sagehens, however. We noted
one horse & 3 or 4 herebreds graz-
ing on the sparse grass growing
in the lower spots. Frank spotted
a beautiful adult mt. coyote in
the grass of a wet little meadow
about 500 yds N of us. It watched
us, little concerned, and slowly
edged farther away & up a gentle
slope. Somewhat farther on we
approached a great jumble of
black rocks rising perhaps 50'
above the plain and here Frank
spotted ~~the~~ what he took to be
two bobcats. They turned out to
be young coyotes and they
disappeared into a den in the
rocks. We presumed that the

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4 June Cabin Creek, 10,500 ft, White Mts., Mono Co., Calif.
adult we'd just seen was one of the parents. Moving west we approached 3 large patches of lodgepole pine, this being one of two known areas where lodgepole grow in the Whites. We each took a patch with instructions to shoot all hermit thrushes, nutatches & kinglets. The hermit thrushes were singing but all I shot here was an Audubon Warbler. Saw a beautiful bobcat track in mud along creek bank. On way back I shot a vesper sparrow and a horned lark, ^{also saw a mourning dove here.} both on the grass-sage flats.

5 June Back to camp by 2. Did a few skins in morn before breaking camp and went to Big Pine for supplies. Then went up White Mt. Rd to the Lower Research Sta. where we stayed for

6 June the night. Up at 5 to see $\frac{1}{2}$ " of snow on ground with temp. of 23°F. Left and entered Wyman Canyon where we set up camp in the meadow just upstream from Roberts Ranch at an approximate elevation of 8200'.

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6 June Roberts Ranch, 8200 ft, White Mts., Inyo Co., California.

On road down to Ranch we noticed a track of medium-sized lion. The track continued all the way down to the ranch & led over to the spring for water. Also noted a smaller cat track at the spring. A little pond in a meadow just below ranch bldgs and v. g. swallows flying over it in numbers. Grouse shot by Russell, tho't different at first from those of Trail but comparison showed they were v. similar if not the same. Quail (Calif., probably) common. Empidonax & Peewees present, House Wren nesting under eave of a bldg. Robin the same. Steller says heard nutcrackers. This canyon is narrower than the other two with much rockier slopes; lots of talus & Conies calling. Microtus californicus in our mdw. Song sparrows for first time. White crowned sparrows in willows & Brewer's sparrows in sage. From Pond there are beaver workings for about a mile continuously downstream. Lots of

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June 6 Roberts Ranch, 8200 ft, White Mts., Inyo Co., Calif.
willow for food but no aspen or
alder. A long chain of small
dams and behind each one
are brown trout. No evidence of
lodges so they must be bank beav-
ers. Golden eagle soaring over hill
to N of camp at sunset. Set out 39
traps in sage & wet mdw after
supper. In afternoon caught a snake
which keys out to Thamnophis angus-
tirostris, Spotted garter snake, which
acc. to Schmidt & Davis occurs only in Ariz.

June 7 & N. Mexico. 6 AM. worked downstream
this morning until about 9. Shot an
Empidonax and a Brewer's sparrow
and saw long sparrow, white-crowned
sparrow, violet-green swallow, Calif.
quail, Steller's jay, Clark's nutcrack-
er, green-tailed and spotted towhee,
Pileolated & Tolmie warblers, Pewee,
Olive-sided flycatcher (heard only), Hairy
woodpecker, and chickadee. Traps
set half in sage and half along
the wet mdw by the pond produced
14 Peromyscus sonoriensis and
2 Microtus longicaudus. Morning
cold & raw afternoon saw a sudden, short

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June 7 Roberts Ranch, 8200 ft., White Mts., Inyo Co., California

flurry of snow from down-canyon. Overcast rest of day and a much warmer night than previous one. Poor wills and saw-whet

June 8 owls out in evening. After b'fast checked traps & found 18 *Peromyscus* and 1 *Microtus* in the first string of 19 traps; 3 *Peromyscus* in second string of 19. 6:30 A.M. started hunting on W side of pond & around the bank of willows & up into a stand of birch close by. Seen: warbling vireo, song sparrow, white-crowned sparrow, fox sparrow, Pewee, Empidonax, Tolmie warbler, chickadee, violet-green swallow. Shot the last 3 species. Also saw green-tailed towhee and robin. There were snow flurries in afternoon but sky cleared by evening. Cold night. At dusk I shot a young saw-whet owl. Re

June 9 set traps, 19 on rocky slope. After b'fast checked traps to find 29 mice out of 38 traps. Many were half-eaten. 1 was *Microtus*, 1 *P. truei*, 1 *P. crinitus*, the rest *P. maniculatus*. At 6 I hunted down road past

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- June 9 Roberts Ranch, 8200ft, Wyman Canyon, White Mts., Inyo Co., Calif. Pond and as far as the next meadow which I crossed. Very dense almost impenetrable willow + rose thickets where beaver have been working. Saw some fresh deer tracks in the mud. Seen: Tolmie warbler, Audubon warbler, song sparrow, white-crowned sparrow (shot), junco (shot), Steller jay, Pewee, Empidonax, violet-green and barn swallows (2) at pond. Weather very raw and cold all day with a honest to God snow storm during the afternoon, clearing skies toward
- June 10 Supper and very cold. 5:45 A.M. went about 2 mi down the road - Frank + shot 2 fox sparrows, a spotted towhee and a warbling vireo ^{and a ♀ cottontail}. Saw the usual birds and a sapsucker as well and a couple of house wrens in song. Back by 9. In eve set 14 of the 38 traps on the talus slope E of camp, baited the other 24 where they were. This string is now almost all set in rocky sites. Weather beautiful + calm all day.

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June 11 Cottonwood Creek, 9300ft., White Mts., Mono Co., California

* Took trip to Naval Research Station, part way down Crooked Creek but turned back before reaching the end because some people were there.

Went to Cottonwood Canyon, arriving about 9 AM, weather clear + warm. A few cirrus clouds. Vegetation sage, fern-brush, mt. mahogany, Piñon pine and good stands of aspen.

Very rocky, great boulders, rounded instead of shale-like layered stuff in Wyman Creek. Scenery v. similar to Pinnacles N. Mon.

And. Warblers conspicuous, s. c. kinglets heard frequently. Robin's nest found. Chickadees, Steller's jay + white crowned sparrows.

Shot a worn hermit thrush. Left about noon. Weather gradually clouding up. * Before trip I checked traps + caught 19 P. maniculatus, 3 P. truei, 3 P. erinitus + 1 Microtus

longicaudus. Went up the canyon near the bldg which goes to Birch Creek. Weather overcast + birds v. quiet. Flock of crossbills came down canyon + I shot two. On way

Just before dark I did come down canyon on rd. right past camp. Frank shot + missed.

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June 12 Roberts Ranch, 8200ft, Wyman Creek, Inyo Co., Calif.

down I saw fresh lion tracks in the road, going down. Frank & Ward said they continued down the road for almost a mile before turning off into the sage. Possibly the lion had spooked up the doe Frank shot at. This is at least 6 days after the other tracks seen on June 6, were made + probably 7 or 8 days. Set out flesh trap near saw-whet owl hangout, baited w/ two Peromyscus.
^{set out 33 snap traps} just before dark Frank heard 2 loud noises about 400 yds up canyon - like a person whooping; thought it was a person. Lion? I strolled up canyon w/ flashlight & got an eye-scrime about 150 yds up. Small doe. Chased her down past Frank who took a shot at her but missed. A little rain shortly after this.

June 13 Fresh Coyote tracks in road by camp. Checked traps: 1 g. t. towhee, 1 chipmunk, 23 P. maniculatus & 1 P. eremicus. At 6 Ward & I drove three miles up canyon when I spotted 4 deer - 2 does, 1 spike & 1 two-

June 13 Roberts Ranch, 8200 ft, Wyman Creek, White Mts., Inyo Co., Calif.
pointer about 200 yds up on a slope near some mt. mahogany. Ward shot one of the does & she ran about 50 yds. Found her dead under a mahogany. Fur v. poor & all off around muzzle & angle of jaw. Pregnant. Two well formed fawns inside when Ward cut her open in camp. Back by 7:30. Shot two Empidonax just down from camp. Reset flash-trap & fawn hip as bait.

June 14 5:30 A.M. Checked flash-trap which had been fired - suspect cottontail tho' no tracks visible. Packed up & left camp for downstream. Picked one where road veers sharply S away from stream just after crossing it. Elev. about 6750 ft. Wyman Creek, White Mts., Inyo Co., Calif. Lizards are everywhere. Much sage & bitter brush & some Pinjons on the hill slope. Stream choked & willow & rose. Soil very sandy. Weather v. warm. Left for Deep Springs. On way saw Chukar & a couple black-tail jacks. ^{collared lizards} Went to Big Pine & returned for late ^{2 more chukar & chick on way back} supper. Epsteinus, Epistrellis and

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June 14 Wyman Creek, 6750 ft, White Mts, Inyo Co, Calif.
Myotis flying about. Poor Wills calling occasionally. Slopes just covered with deer tracks. Full moon. Set out 30 traps: 10 in sage, 10 on rocky slope, 10 on sand & in road.

June 15 Checked traps to find 19 P. maniculatus + one possible P. eremicus. Hunted upstream for about 2 mi. from 6 till 11. Broad-tail hummers common. Towhees also. Saw b. h. grosbeaks, gnatcatchers (also common), Toluie warblers, chickadees, Steller jays, warbling vireos, fox sparrows crossbills, Empidonax & Pewees. Shot a Steller Jay with food in its mouth (insects), 2 gnatcatchers and a spotted towhee. Also a Toluie + a vireo-sized bird, neither of which I could find. Weather hot + clear with occasional breezes. Lizards everywhere. Shot only 1, a Sceloporus. After supper set 26 traps in rocks almost exclusively. Went for walk with Frank up road at dusk. Saw a few Jackrabbits and some desert sparrows but a few bats. Very windy. At noon ^{checked traps + got 1 Pterognathus + many Picus myiagrus} hiked down to gorge which begins about 1/2 mi. below camp. It is quite

June 16

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June 16 Wyman Creek, 6750 ft, White Mts., Inyo Co., Calif.
steep c walls rising perhaps
200' in spots. Length is about $\frac{1}{2}$
mi. Weather very hot & saw no birds in
gorge itself. Followed creek down another
 $\frac{1}{2}$ mi. to jct. c the cut-off road. Saw
Chukars (4 or 5) which ducked into
willows along stream. Shot but lost a
chat. Saw what I took to be Zapus
jumping in some tall grass in a
marshy area. Took cut-off road back
to camp. Went through rock & sage
flat & hills. Shot a desert spar-
row & 1 collared lizard, 1 Sul-
oporus and two Oreomys.
^{Saw 2 leopard lizards}
Scared up a couple jack-rabbits
and 4 or 5 more Chukars. Road
covered c Chukar tracks. In evening
night hawks flew above camp &
Frank shot 2. We all went
into gorge to set traps for
Zapus. Frank & Ward in up-
per part, I went down to lower
area & left 8 traps. Heard Saw-

June 17 Whet owl on way back. Started out
5 AM c Frank & went down ^{cut-off} road in
hopes of Chukars but no soap. Lots of
jacks, desert sparrows, a ♂ tanager

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June 17 Wyman Creek, 6750 ft., White Mts., Inyo Co., Calif.
a night hawk and a prairie falcon. Among all these rocks would appear to be ideal nesting sites for the falcons. At junction with stream we stopped to do a little hunting in the streamside willows. A night hawk dove once. Good many yellow warblers here & some spotted towhees and a pair of long-tailed chats of which I shot the male after a 20-minute patience contest. Farther upstream I shot an immature spotted towhee. Checked my traps & found 4 of the 8 traps had Reithrodontomys but nothing else.

June 19 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.
Rslide Went c Legold, Dick Gard, Jerry Russell and Dr. Needham to Rockslide Colony. Creeper has nest under bark in a l-pole in main pond. Caught a medium-sized rubber boa on a rock a few feet out in the pond. Not a great deal of new beaver work

June 20 above main dam. " Went c Legold, ^{Bob} Jerry & Dick up to Bob's Grouse area. Fox sparrows singing in the ceanothus brush. Heard grouse hooting and flushed two. Heard tanagers but couldn't get good looks at them.

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June 24 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

Took stroll over to mdw. across creek from camp. Marmot occupying stump of the bridge log again. Sheep are in! Elbert and I saw a pair of evening grosbeaks in willows at generator bldg. Don't remember seeing any here before. A little later at camp had good looks at chipping sparrow, w. b. nuthatch, red-breasted sapsucker, Audubon's warbler. Weather clear

June 25th warm. " About 1 PM Dick Gard & I
R'slide went down to upper end of Rockslide colony to take a trial willow sample. a lot of problems. Made a run using red paint - think yellow would be better for weathered willow. ^{Saw Beechey on road} Went down to lower limit of rockslide colonies (the big dam built along a log) to see if beavers had extended workings downstream; no evidence of this. Left about 4 after a swim in deep channel above lowest dam. 7 PM left for rockslide colonies to go fishing. Saw three does, 2 in willows at stream's edge, all very tame & hesitant to leave willows. Suspect fawns but saw none. ~~Heard~~ Saw what was probably a beechey about same place on road where we

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June 25 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

R'slide saw the one this afternoon. Heard chick-
arees once. Heard beaver chewing on
willow in lower rockslide area, watched
a medium-sized one swim around
lodge in middle area. Slapped tail once
& dove. The lodge looks in poor repair.

Cool wind blowing in evening. Left 9 PM.

June 26 Left main camp 8 AM for U. Colony. On way
U. colony up saw pewee, olive-sided flycatcher, song,
white-crowned and chipping sparrows,
warbling vireo, ♀ Williamson's sapsuck-
er, cowbird, mt. chickadee (& nest in hole
in dead stump about 18" above ground),
juncos, r. c. kinglet and heard mt.
quail and pileolated warblers. Reached
U. colony 9:30. Windy & clear. A 10" asp.
felled below main dam & previously marked
c black, has leaves out & as well developed
as those of standing trees. A little
wood still intact but no bark. Beavers
have been cutting rather extensively in
area just east of rocky slope but well
away from stream, as far as an es-
timated 50 yds. in one place. The main
lodge appears in excellent shape &
to be gradually increasing in height.
The main dam is in good shape but

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June 26 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., California

U. Colony shows no new work. Dams just upstream are being added to & the ones opposite rocky slope show lots of new material & are higher than on last visit. Three new, small dams have appeared upstream in general vicinity of station 32. At 11 o'clock a chickaree started to cross this section of stream on a log. Its mouth was so full of shredded bark that it almost tripped. Part way across it stopped and spent about 15 sec stuffing the bark in its mouth before continuing rest of way across stream. Cutting schedule. Sept 11:25.

June 27

Set out 2 traps in Rockslide colony N. Luck

D	X	L
1		
2		
3		
4		
5		
8		
10		
14		
17		

// Main camp 4 PM. Took short hike up slope N of camp, circling around to spring camp. Ceanothus & fir areas alive & deer. Saw chickadees & my

first Calaveras warblers which were singing. Heard Steller's jays once & lots of Hermit thrushes but didn't see any. Found picnic log of chickaree, covered & cone remains & heard but didn't see chickaree. Back by 6:30.

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June 28 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

L. Colony 1:30 PM. Went to check L. Colony. Roadside has now extended down to bend in stream where it was last fall, not appreciably farther but there has been considerably more cutting since then + since May visit. Still a considerable gap between lowermost part of this colony and uppermost part of lower colony. Went downstream on S side, crossed below main dam + came back up the N side. Occasionally saw both here + at U. colony "bear" sign where some big animal had torn out large strips of wood from dead, fallen logs. Maybe looking for grubs. The shack colony is flourishing. Lodge bigger than ever, 4' above water's surface + 10' in diam + overflowing log against which it was built. Water higher than previously. There are two areas of intensive cutting, both in "old" section: one rather high up the rocky + already cut over slope uphill from S end of main dam + in general vicinity of our last Sept's camp. One tree cut over 60 measured yds from water. They are going right by the profuse sprouts to get at

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June 28 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

these trees farther upslope. The other area is on the N slope around stations 16, 17, & 18 where there was also a spurt of cutting last spring followed by a lull the rest of the season. This area which was a rather dense stand of about 3" trees $1\frac{1}{2}$ yrs ago is now practically leveled. Crossbills, a downy, jays and a bird about dove-sided flycatcher size which gave single notes formerly thought to be pigmy owl, then mt. quail. Couldn't get a good enough look for ident'n. quit at 5 but returned to finish marking from 7:30 to 8:30 PM. Red-breasted sapsucker seen going to hole in top of tall, dead l pole about 8 PM & yng gave loud cries, so must soon be ready to leave nest. Marking schedule: "OLD" SECTION

SOUTH SIDE			NORTH SIDE		
D	X	L	D	X	L
1			1		
2			2		
3			3		
4			4		
5			5		
6			6		
7			7		

add a 2" to last visit + a 3" to next to last OK



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June 28 Sagehen Creek, 3mi. NW Hobart Mills, Nevada Co., Calif.

L. Colony Marking schedule cont. "New Section:

SOUTH SIDE		
D	X	L
1		
2	(add a 2"	
3		to last
4		visit) OK
5		
6		
7		
11	35	

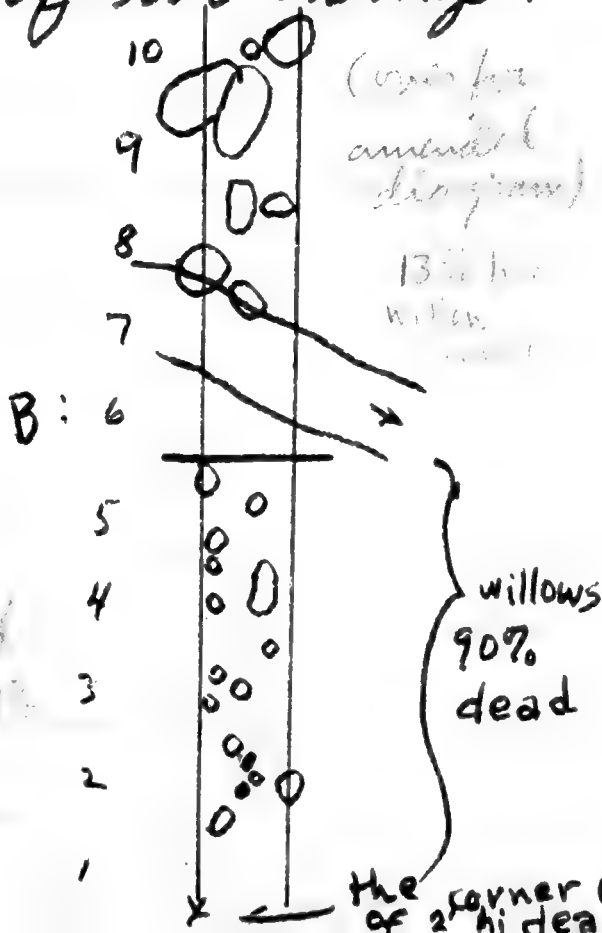
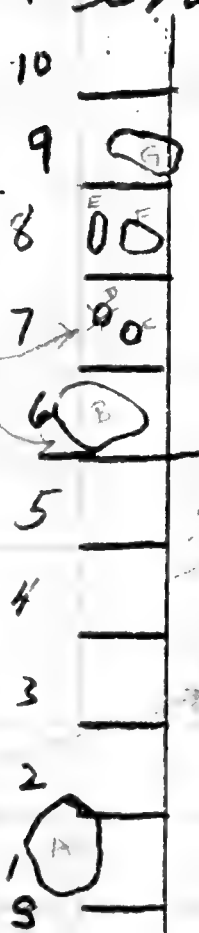
NORTH SIDE		
D	X	L
1		
2		
3		
4		
5		
6		
7		
11		add a 6"

Left 8:30 AM. Weather clear, hot, calm all day. Heard beaver dive & smack of tail at shack colony as we were leaving.

June 29 Reset two traps at Rockslide colony. No luck. A scent pile ^{on shore} near the "submarine entrance" of middle R'slide colony.

June 30 Strong odor of castor. Lots of mink (?) tracks on muddy flats. On some dams grassy sod has been used. Started willow samples. Sample "A" at lower

end of workings:



○ = evergreen tree
⊙ = dead willow clumps
⊖ = clump of willow

In the field 3 stakes were left in place: at the zero, 50 and 100ft marks respectively on the W edge of each sample strip.

willows
90%
dead

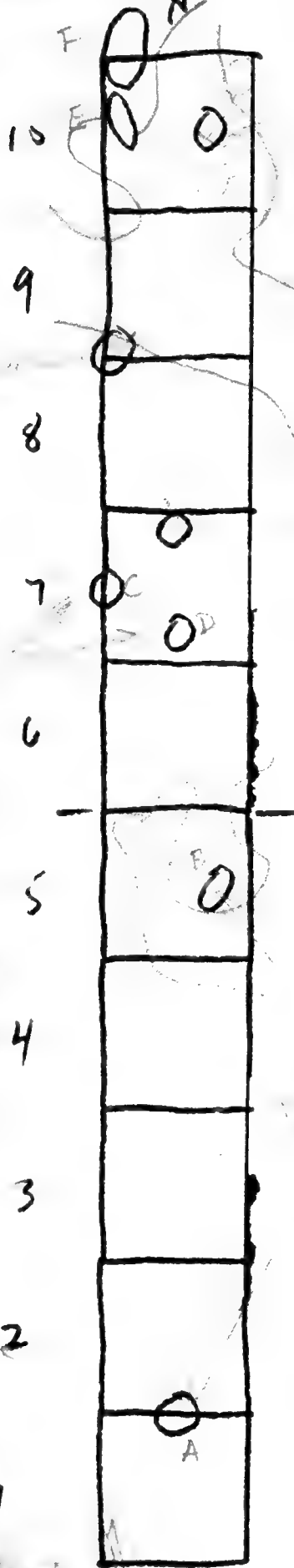


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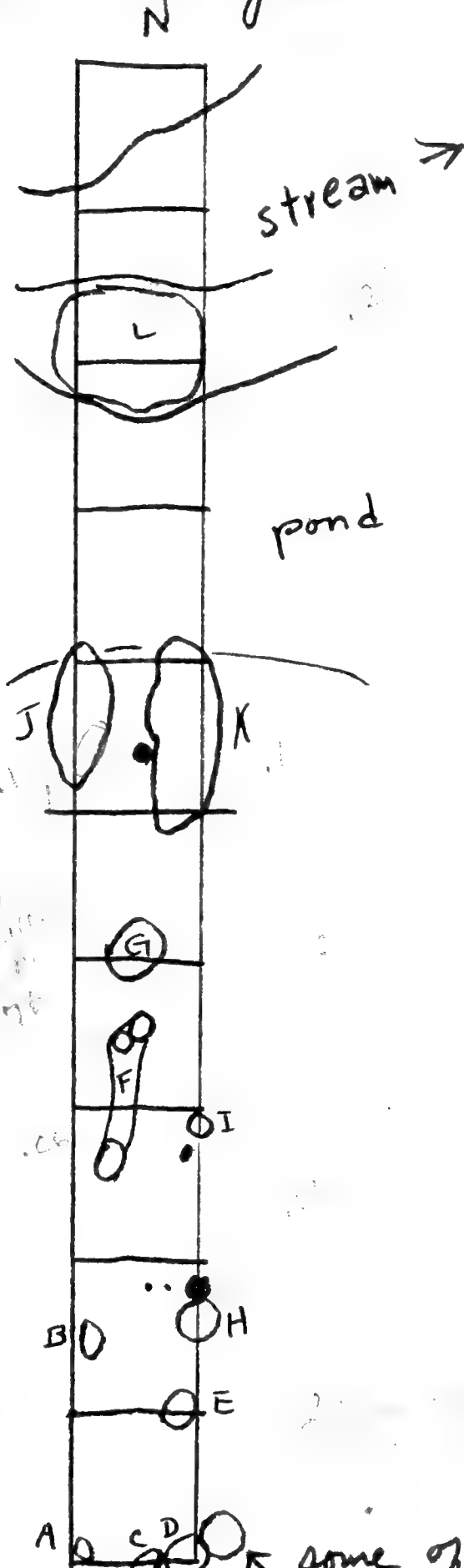
195

July 2 Sagehen Creek 6500 ft., 3 mi. NW Hobart Mills, Nevada Co., Calif.

R'slide Laid out willow samples C & D:



"C"



"D"

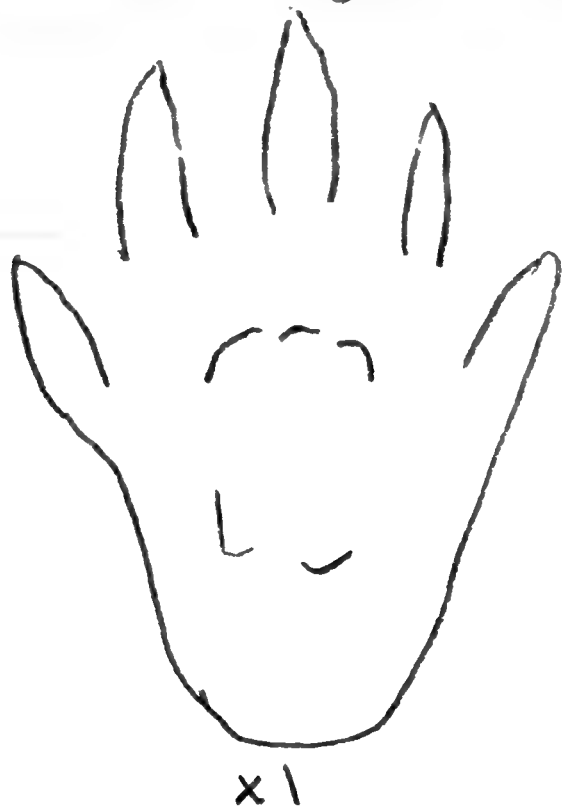
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1954

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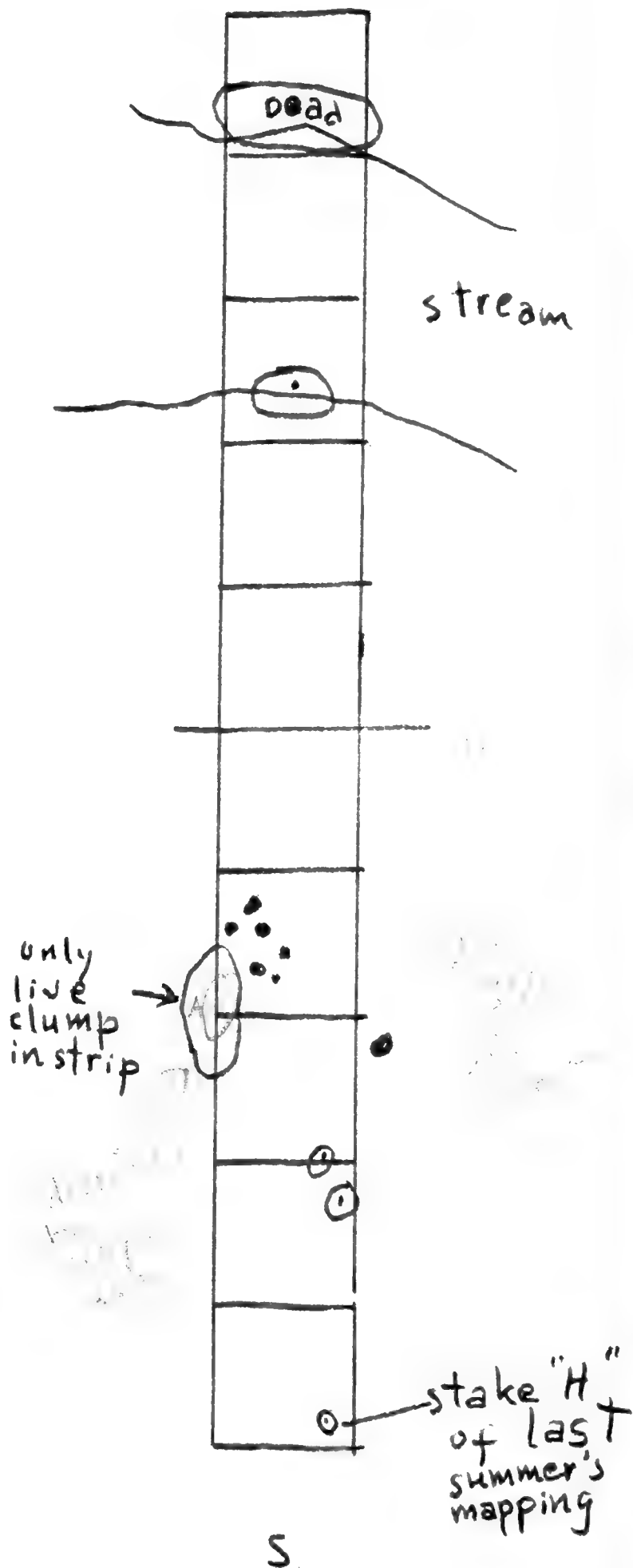
July 4 Sagehen Creek, 6500ft., 3 mi. NW Hobart Mills, Nevada Co., Calif.

R'slide 12:00 noon. ♂ W. tanager in tree in middle of workings. Saw many mink tracks of two different sizes - adult + young I presume.

Set up sample "E"



This was one of the largest size. Evidently lots of travelling done along mud banks + flats around the beaver workings. All kinds of mink habitat has been created here. Lots of shelter and water moving from fast to not at all. Good flash trap set.



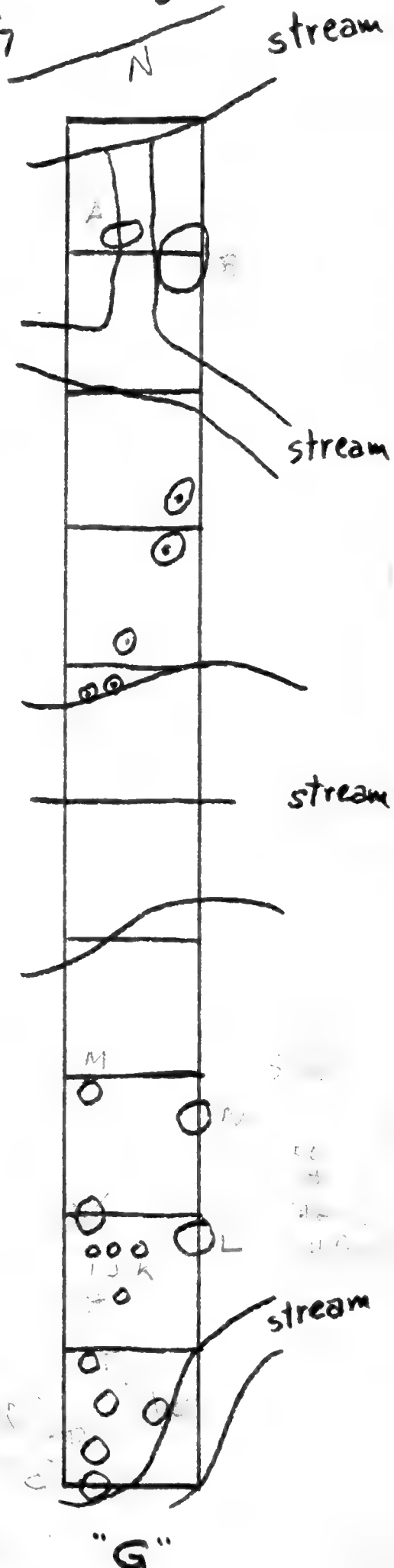
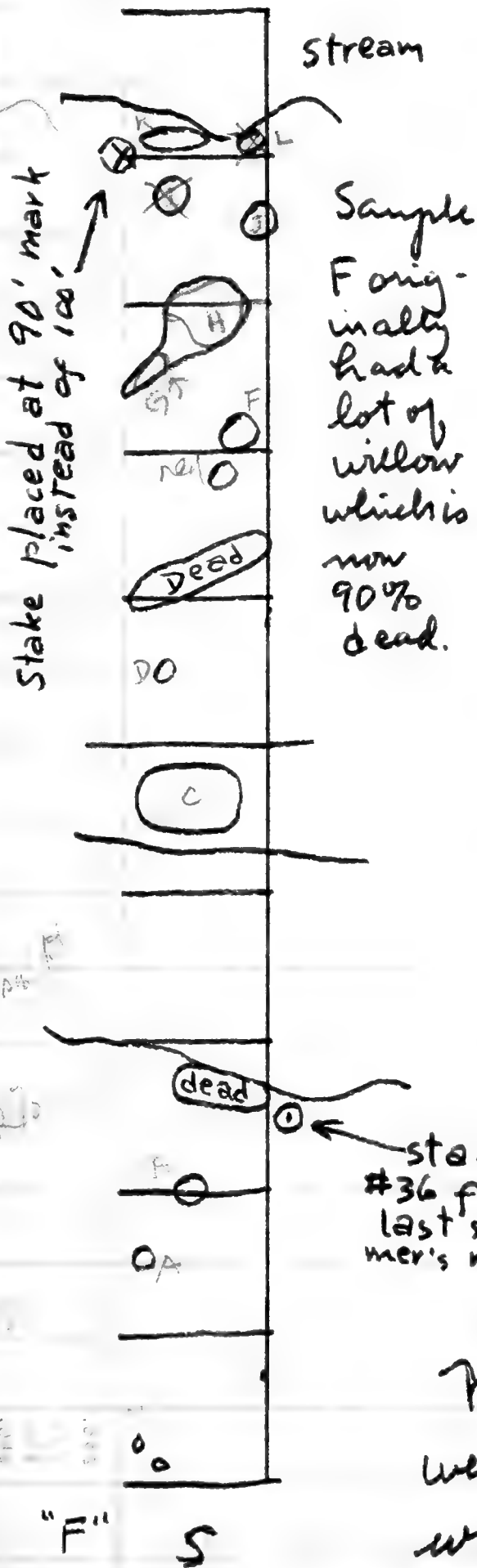
July 4 Sagehen Creek, 6500 ft., 3 mi NW Hobart Mills, Nevada Co., Calif.

R'slide Thought occurred to me that late fall until early spring would be the best time for taking willow samples since, without leaves to obscure things the cut stumps could be more easily seen + painted. Willow sample F & G


It might be a good idea to take periodic photos of each willow sample to show difference between use & availability among various colonies.

6 PM. Set one trap at pond by pt. #18 and it went off about 8:30 according to fisherman, catching a fair-sized beaver.

Mosher, Painter & I went down at 9:15 to wrestle it. In a hurry



July 4 Sagehen Creek, 6500 ft, 3 mi. NW Hobart Mills, Nevada Co., Calif.

R'slide mood & hard to handle. Tried caustic stick on tail but this seemed to do no good at all so used branding fluid which seemed to have no immediate effect. Branded left dorsal surface at midpoint: . Tried some of the yellow laquer on back of neck. Got him in barracks bag but he tore his way out by ripping a small opening larger. Dick caught him by tail but he had a hard time getting him back in the trap & Jack & I got small bites in the fray. Need a shorter & perhaps heavier bag or maybe a metal cone. Didn't feel safe to attempt to sex it but did note 3 or 4 pink bodies extruded from anus. Est. wt. 40 lbs. Reset the trap after freeing the beaver.


July 5 Arrived 10 AM & laid out sample "G" (on previous page). At noon took shot of the North end of this section. There is not one new cutting on this entire sample although about 75% of it has old cuttings. at 1 PM laid out "H" & "I" samples (see ^{page 200} ~~next page~~). From 7-8 PM I set out flash trap for mink using pieces of trout for bait on an area of muddy shore

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July 5 Sagehen Creek, 6500ft., 3 mi. NW Hobart Mills, Nevada Co., Calif.

R'slide where tracks have been numerous for some time. This is a little above the middle of the three Rockslide lodges and near where I caught my first beaver (dead) last yr. Shortly after 8 I climbed up in the old tree just below main dam. Not much activity other than 2 does which came to water at 8:40 from S bank and one came right down to the minke set, drank, slowly worked upstream, browsing as she came. One doe had a distinct dark line coming down dorsal surface of tail - like O. h. californicus, the other's tail was a typical O. h. h.

 The one in the stripe was not as distinct as a "good" californicus but was definitely suggestive. 8:50. nighthawks flying low over rockslide, then ponds, then up to within 15' of me in tree. Surely appears to be smaller and to fly in more rapid wingbeats & lower than the "booming" nighthawks. Possible cause for the white wash marks on Rockslide? Left at 9 P.M. (See next page for diagrams of samples "H" & "I".

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1954

199 A

July 5 Sagehen Creek, 6500 ft., 3 mi. NW Hobart Mills, Nevada Co, Calif.



Young mink self-portrait using fish
as bait

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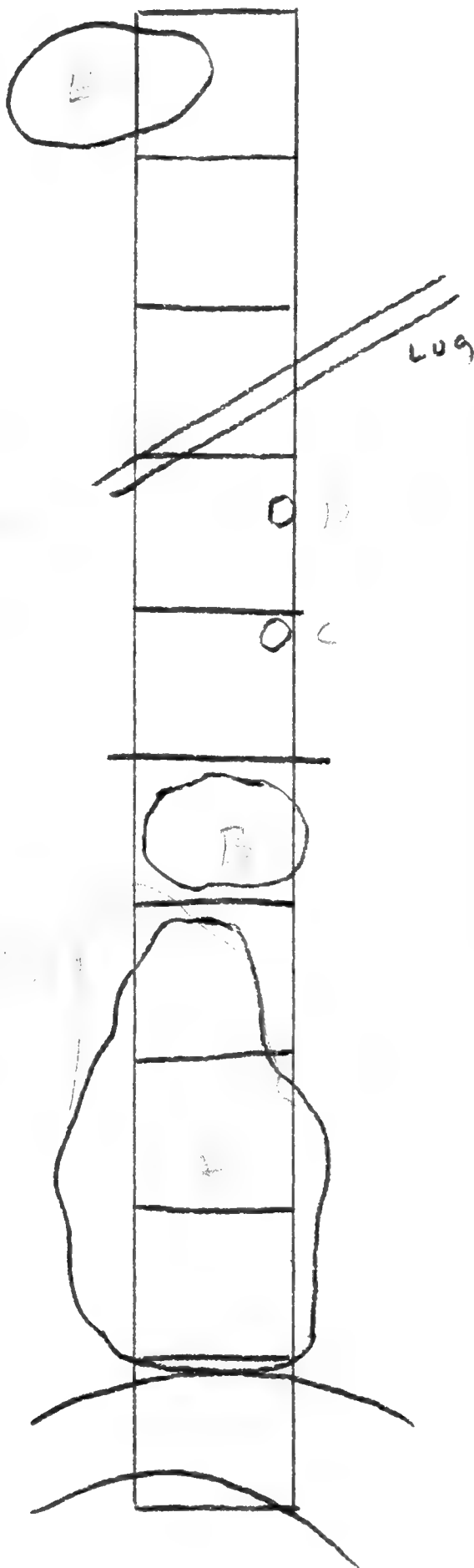
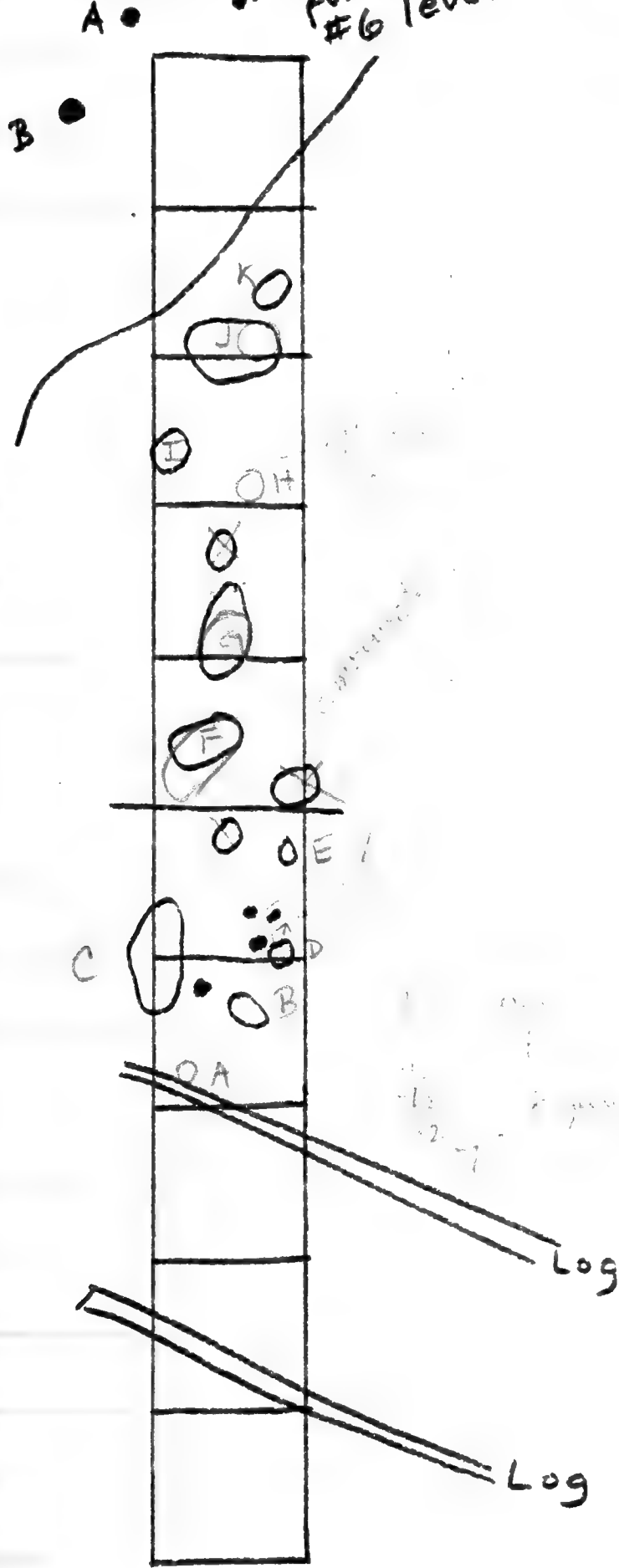
July 5 Sagehen Creek 6500ft, 3 mi. NW Hobart Mills, Nevada Co., Calif.

R'slide

1 PM

N - marker for Gard's #6 level

A: 1' pond pine 2' from stake position. B: 2+ " pond pine 4' from stake position.



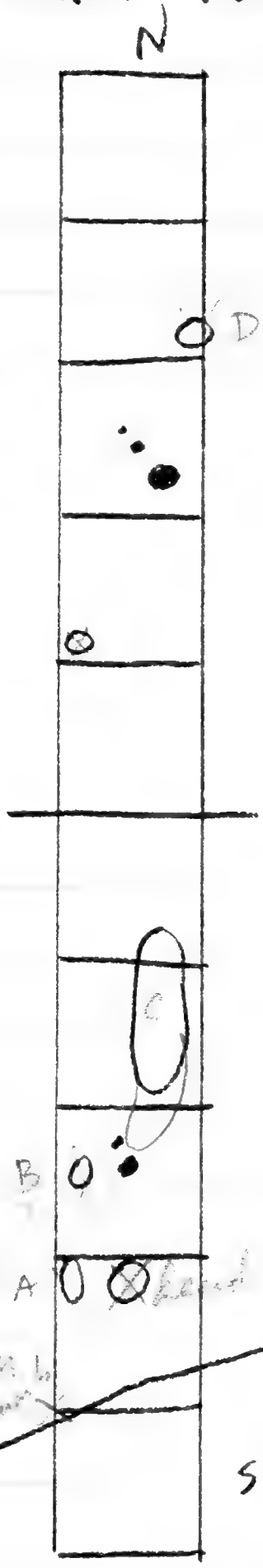
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July 6 Sagehen Creek, 6500ft, 3mi. NW Hobart Mills, Nevada Co, Calif.

R'slide Mink had fired slash 10-11:30 AM. Took "J" sample = Bob Rupp

July 12
U. colony

Heard porcupine + horned owl last night
arr. U. colony 10:30 am.
calm, clear, V. hot. Marked
new cuttings, most of which
are on N shore opposite
lodge although a new
section has been started
just upstream from the
Rocky slope. Marking
schedule:



D	X
1	11
2	
3	
4	1
5	1
7	1

A 1"-er should
be added to
"black" series.
(as per p 155)

A possible item would be
cf. of linear rate of
spread between the
colonies. //

July 18
L. colony

9:30 AM. Birds seen on way
down: chickadees, red-
breasted nuthatch,
song sparrow, junco,
steller jays, mt. quail,

red-breasted sapsucker, hairy woodpecker,
also saw bedding ground squirrels.

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202

July 18 Sagehen Creek, 6500ft, 3 mi. NW Hobart Mills, Nevada Co, Calif.

L. colony At shack "colony", the stream, which had been diverted from main channel to run between the shack and the log cabin, is now dry. This has been caused by raising level of the V end of the dam originally causing the diversion. Now all the flow goes back into the main channel. 10:35 Pair of warbling vireos scolding and insect-hunting at shack. 10:55 Pewee sitting on nest on dead limb of lodgepole 10 or 11' above water and about 7' out from trunk of tree. This is just down from sta. Z. Much concentrated cutting on the slope ~~to~~ S of the main pond, higher than my camp on the old RR tracks. Firs being hit heavily again in New section, S. side. Good canal S of Shack lodge; fresh mud on this lodge. Cutting schedule:

New Section: North

D	X
1	III
2	III III III I
3	III III
4	III
34	

: South

D	X
1	III III
2	III III II
3	I
22	

Old Section: North

D	X
1	III
2	III III
3	III
4	I
6	II
T ₀	

: South

D	X
1	III III III III I
2	III III III III III I
3	III
5	I

Left 1:15 weather clear, breezy & hot.

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1954

203

July 18 Sagehen Creek, 6500 ft, 3 mi. NW Hobart Mills, Nevada Co., Calif.

R'slide 7:35 PM at upper obs. tree. Stayed till 9. No beaver.
8:40 pr. of "small" night hawks appeared flying low. 9:00 2 does down to drink.

July 19 Set 4 traps at Rockslide in afternoon. Poor-wills calling near our tent at 9:30 PM.

July 20 At 1:30 AM we heard at least 2 horned owls near our tent, one was low pitched or more or less "normal", the other was higher pitched & had a tremolo effect. 6:15 AM at the stream seep on lower road to main camp saw a pair of evening grosbeaks. This seep must have something special in it to attract birds. Almost every morning there are several kinds

R'slide gathered there. At 6:45 checked traps to find one caught near sta. 21. It had two big bare areas on the back of its neck and one on the top of its nose where the trap must have caught it. Pulled it in its trap up onto bank & went down to tell Clyde who was at the highway crossing. At 9:30 we went back down & Clyde to beaver in trap. He sexed it & showed Rick Gard & me how to do it. It was a male which he estimated as barely over 7 yrs of age. He weighed it in the trap & then the empty trap after the beaver was

J.G. Hall
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July 20 Sagehen Creek, 6500ft, 3 mi. NW Hobart Mills, Nevada Co., Calif.

R'slide released. Total wt. of beaver & trap: 64 lbs

- wt of trap alone: - 29 lbs
wt of beaver : 35 lbs

12 oz. at birth

8-12 lbs = kits (at this time of yr.)

20 lbs = yearlings

30's = 2 year olds

40 + lbs = adults (3 + yrs old)

Clyde's
wt. - age
estimate

Carpenter
& Ever
Valleys

Using the branding fluid I branded the tip of his tail: V. Spent all after-noon & Walt Frazier checking coyote & Bobcat traps in Ever & Carpenter valleys but no catches. 6PM at big fallen log 200 yds up road from main camp, came on 3 long-tailed weasels playing. Very bold. Two of them climbed a 6" lodgepole nearby, eyeing me intently, the third darted in and out among the crevices of the log, only 5' away.

Responded well to squeaks & gave some R'slide of their own. 8:30 PM checked two Rockslide beaver traps. 8:45 AM checked both traps

July 21 no beaver. 9:15 AM while I was standing on top of the mid-colony lodge a large beaver swam out lodge entrance & over to the burrow on the island, all under water & in a hurry, scuffing up mud from the bottom as he went. Didn't reappear.



July 21 Sagehen Creek, 6500 ft., 3 mi. NW Hobart Mills, Nevada Co. Calif.

R'slide

As noted on the 6th, much of the E. end of the asp. stand has been cut earlier this year. Heard but didn't see nutcracker in the forest N of Sagehen Road at 4:30. ^{after setting all 4 traps.} 7:35 PM at obs at the lower lodge. As I climbed the tree, a yng beaver, perhaps a yearling, appeared in pond, swam to isle, resting in shallows for about 5 minutes before diving. No marks. 7:45 came around island from NE end, rested on a partly submerged log and then returned the way he'd appeared. 7:55 Presumably the same animal seen eating shoots of willow at SE end of isle. 8:00 another unmarked beaver of about the same size seen near the isle. Swam back & forth in main pond. Noticed that paws of front feet were held forward, not backward "in waistcoat pockets" as held by Wugmore. This may not hold true for beavers swimming fast. This beaver swam upstream thru gap in blasted dam, reversed to chew off some willow shoots for a minute before diving into lodge ^{at 8:10}. Meanwhile I had lost the other beaver. Noted Audubon Warbler in my tree. At 8:15 a "yearling", unmarked, emerged from lodge, swimming w

July 21 Sagehen Creeks, 6500ft, 3 mi. NW Hobart Mills, Nevada Co. Calif.

R'slide to the isle, then, on surface 25' upstream from blasted dam to some willows on which he fed partly in & partly out of the water. This is the farthest upstream I've actually seen a beaver from the vicinity of this lodge go. At 8:20 he came back to lodge, acted as if he might go up into the little cove where I had one of my traps set, just upstream from the lodge, but didn't. Can't decide if these guys are actually trap-shy or not but this one acted a little bit that way. He next returned upstream thru gap to same place he'd fed before. I lost sight of him shortly. 8:25 saw beaver caught & sexed yesterday just about to come over the crossing from N channel to main pond. A trap was set just on the pond side of this crossing and as he had his nose about even to the edge of it, he hastily backed off and entered main pond via the little dam where I'd previously had a trap. This beaver is the one caught July 20 near sta. 21 which is 100+ yds upstream from here. He was coming up from somewhere downstream. He dove near the lodge. This is the

- July 21 Sagehen Creek, 6500 ft, 3 mi. NW Hubart Mills, Nevada Co., Calif.
R'slide first real proof that a beaver freely travels substantially up & down from the gap in the blasted dam which I'd previously suspected might form some kind of a territorial boundary. The skinned areas on back of shoulders and head were plain & unmistakable but I could see no mark on the tail. ^{back marks:} . At about this same time a small one appeared between the ends of the blasted dam but was lost. 8:30 small one near isle disappeared, reappeared, then dove into lodge. This one seems to have what looks like a big fly sitting on his head between but a little posterior to his eyes:  This may or may not turn out to be any good as a field mark. Left 8:35 P.M. // Up early to check traps since last night was v. cold. No luck. Spent all morning showing Don Cornelius, Gerald Geraldson & Mr. Williamson of the FS, Bob Hoffmann's trap lines. In afternoon made signs for traps & set all 4 just before supper. By 8:30 temp. was as low as it had been this time last night so I went down & set hooks on the traps. // Checked pos'n. of willow strips and couldn't locate: N stake for B, M for C, M for E, N for E, M
- July 22
- July 23

J. G. Hall
1954

208

July 23 Sagehen Creek, 6500ft, 3 mi. NW Hobart Mills, Nevada Co., Calif.

R'slide for H, M for I, M & N for J, 8:30 PM. Brock saw
Reset all 4 traps.
the "mangled" beaver in a stretch of stream
in the lower part of the R'slide area, roughly
opposite the lower OBS snag. This extends
the "range" of this beaver another 100 yds
for a grand total of 200 yds of stream.

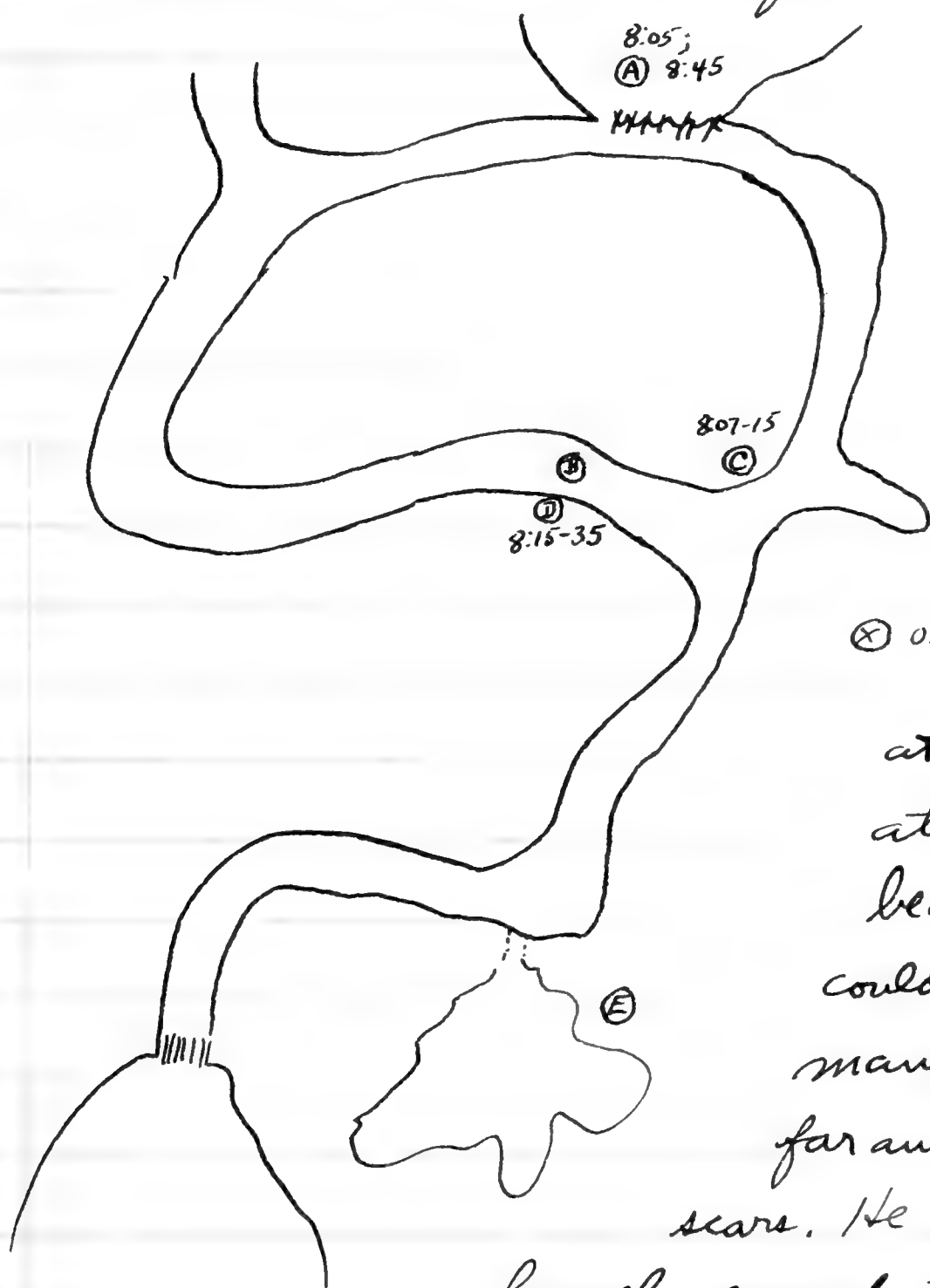
July 24 8:30 AM. checked all 4 traps but no beaver.
10:30, lowest pond, saw 4 baby ducks - ru-
fous heads & dark gray backs interrupted by
big white spots on the flanks. Gave
peeps similar to those of Belding ground
squirrels. Swam to big log, ran around
it & disappeared down stream below the
dam. Think they were baby mergansers.
They were 6 or 7" long. Checked willow
stakes driving in & painting new ones for all
except the N stake for B which will have
to be relocated. 4 PM scared fawn at N.
end of R'slide area near pond #13. 7:45 PM
climbed a tree to watch for beaver in ponds
12 & 13. Had all traps reset, 2 of them in
pond 12. 7:45 PM saw a fawn. 8:00 ♀ hum-
mingbird hovering near my perch 30' above
ground. Had green back & top of head,
buffy on flanks & white tips to tail corners.
Could have been Calliope or Rufous.
Left at 8:50 after seeing no beaver.

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1954

209

July 25 Sagehen Creek, 6500 ft, 3 mi. NW Hobart Mills, Nevada Co., Calif.

L.R. slide 9 AM. Checked all 4 traps, no beaver, tho' there were fresh droppings on the lowest one. The bottom just upstream from this set is just covered i droppings. Reset all 4 in afternoon. 7:25 PM at OBS snag of Lower Rockslide. Calm, ^{warm} ~~clear~~, a few clouds.



8:05 one seen briefly in pond #3 at "A" & v. shortly afterwards old

"mangy" appeared at "B", swam to "C" & ate willow tips. The beaver seen at "A" could possibly have been mangy but was too far away to show any scars. He did just have

barely enough time to have gotten around to B tho' not over the dam. mangy ate at C till Brooks, fishing upstream on the N side scared him over to D where he continued to eat. While at C I had a

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1954

210

July 25 Sagehen Creek, 6500 ft, 3 mi. NW Hobart Mills, Nevada Co., Calif.

R slide good chance to look at the dorsal tail surface through binocs & could see no evidence of any wound from the branding fluid. At 8:15 a doe app. near the #2 sign of Gards' and had a definite dark stripe down the dorsal tail surface. Heard what was either chewing or just running water near E but never did see any beaver.

"Mangy" may have come originally from the bank burrow or lodge near D if not from pond #3. He disappeared near D at 8:25, possibly into the burrow, to reappear at 8:35. Gone 8:40. 8:45 Elbert saw him in the N channel of pond #3 & touched his head to his flyrod! He must have gone around from D to there via the S end of the loop, not the N end (& this would be the same way he came down stream if the beaver seen at 8:05 was really "mangy"). Left at 8:45 PM.

July 26 9 AM. checked all 4 traps - no beaver.

July 28 Lower colony 3:15 PM. One adult & at least 4 downy

Lower colony young mt. quail seen in Wyethia just upstream from big snag that Mosher pushed over. Adult didn't seem in any hurry to leave, just kept giving what must have been warning or "hide" notes to the young.

July 28 Sagehen Creek, 6500 ft, 3 mi. NW Hobart Mills, Nevada Co., Calif.

Lower
Colony

The young were colored "two-tone" dark & light brown. A couple of seedlings 4 & 8" high respect. have taken root under the excavation left by falling of snag Jack Musher pushed over on June 28. at 3:35 2 took shot of Gard taking water sample 25.6 exp. 4 PM took 2 shots of balanced stump one at 28, one at 35.6 and shots of marked & unmarked asp & drag-trail and one of the general stand from a rock painted with a red "P", all at 28. Much cutting on this slope. 4:05 flushed 4 grouse near station "N" on S side in a low area of small asp & Wye-ethia. They flew upstream in a fairly level line of flight. Left 4:15

July 29
Upper
colony

Betty & 2 drove all the way up to U. colony in Dick Gard's jeep, arriving at 10 AM. Clear, calm & hot. Cutting schedule:

P	X
1	11
2	111 111
3	111 111
4	111 111
5	1
6	1

a 1" should be added to first count this summer

and one should be added to last winter's count sometime. Newest cutting has occurred upstream on

N side. Left 11:30 AM.

R'slide
July 30

Set 4 traps at 4 PM. Checked these at

July 31

10 AM but no beaver. Left one trap set at dam #13. Won't think beaver are up here

J.G. Hall
1954

212

July 31 Sagehen Creek, 6500 ft., 3 mi. NW Hobart Mills, Nevada Co., Calif.

Aug 1. at this season of year. // 9 AM. Checked the
R'slide one trap which was empty. Started for lower
colony arriving at Roadside 10:10. Kingfisher
perched in dead tree in mid-colony. Heard
Roadside another about where hiway crosses stream.
Lower Sheep have been driven up stream recently (1-3
days) much sign. Arr. L. colony 10:30. Birds seen:
Bluebirds, Downy, Pewee, ♀ hummer (Callipe?),
creepers. Chickaree, chipmunks, ground squirrel
& Belding. 11:20 color shot #15 of asp. stand at
shack from S shore near 3 large l' poles
at 25 exp. 11:25 shot #16 of asp. stand just
up from shack from asp log felled across
the stream at 25 exp. Cf view from sta 2
taken last Sept 9 & they are not enough
Δ now to warrant taking till about
that time this fall. New dam is going
up a little above where big snag was,
pushed down on S. side. Color shot of it #17 at
12:05, exp. 27. Cf. scene from burnt snag
near sta #18 taken on Sept 9 c present
condn. & tho' some interesting Δ are
there, they'll wait till Sept. 2:30 ~~two~~
shot of two fir stumps at 13.5 exp. to show
method of cutting. 2:50 shot of fir stump &
tree to show same, exp 23.5. New dam going up
on S side along fallen log at end of timber

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1954

213

Aug 1 Sagehen Creek, 6500 ft., 3 mi. NW Hobart Mills, Nevada Co., Calif.

L. colony & beginning of the open asp stand. Marking:
Left at 3:15

NORTH SIDE				SOUTH SIDE			
NEW		OLD		NEW		OLD	
D	X	D	X	D	X	D	X
1	III	1	III	1	HHH HHH HHH HHH 1	1	HHH HHH HHH HHH HHH HHH
2	HHH 1	2	III	2	HH HHH HHH 1	2	HH HHH HHH HHH III
3	HHH	3	III	3	II	3	HHH II
4		4	I	4	I	4	I
5		5	I	5		5	
6		6	III	6		6	

Weather v. hot all day. Reset ^{one} trap at R' slide.

Aug 2 9 AM. Checked the one trap set last night - no R'slide beaver. Start of the pumping & draining of a beaver pond today. Broke thru dams #4, 15 & 16 to divert water & permit pumping of pond #14. 9:45 ^{color} 2 shots above & below dam 16 & one of pond from just above dam at 25.6 exp. 10:05 one shot of break in dam to show extent of destruction (down to gravel) exp. 24.

Moved all 4 of my traps up from below to vicinity of pumping & draining ops. 3:45 shot of pond #16 at 27 exp. to show lower water level. After supper came back, set 3 traps, one above each dam break & the flash trap across the upper break. Watched the

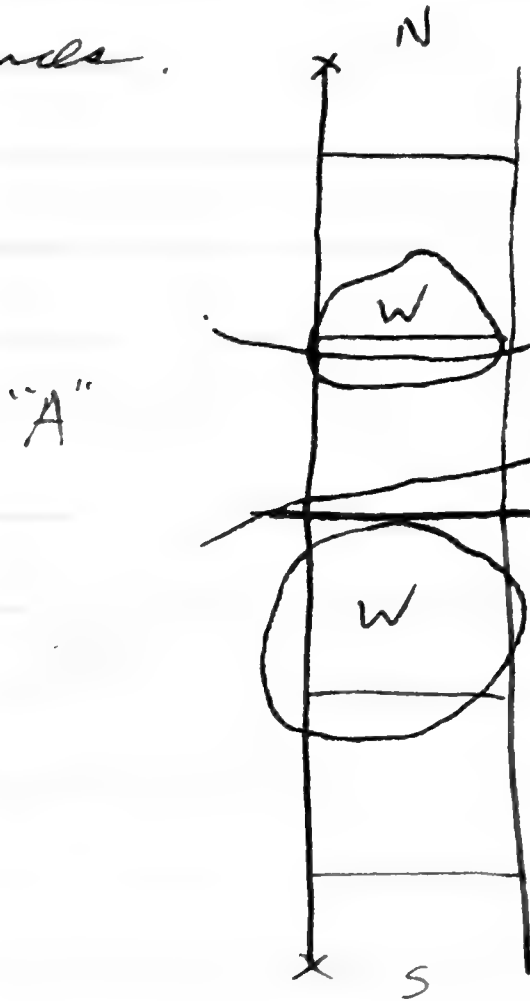
Aug 3 break till midnight; no action. // Checked camera & traps at 8 - absolutely no results. 4 PM tried to relocate asp. samples but could not locate N end of "A" or "C" and found no trace of either end of "B". Left 5 PM.

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1954

214

Aug 7 Sagehen Creek, 6500 ft., 3 mi. NW Hobart Mills, Nevada Co., Calif.

U. colony Started willow samples i help of Wick Gard. Sample "A" is 20 ft. upstream from largest bridge log. The N & S stakes were set at the 25 ft. distances.



no beaver use at all on these two clumps

1:30 PM took two color shots at 25.6 of cutting from dead-fall roots. Sample B had no willow so left just one stake to mark location at foot of of gigantic lipole. Sample "C" (diagram

on next page). S stake is a wooden stick near stump at end of rotting log. Set 4 Rockslide traps and left at 5 PM. / Arr. upper OBS tree of Rockslide 7:20 PM. Almo & Elbert fishing in immediate vicinity. Almo reported one feeding about 7:05 & last night Elbert saw "scarback" above the upper lodge. 8:00 a beaver barely visible down in middle section. also one seen in main pond where Elbert's fishing & turns out to be scarback. Floats about 25' above dam & that distance from Elbert. at 8:05 he went over

2/5-

Sagehen Creek, 6500 ft, 3 mi. NW Hobart Mills, Nevada Co., Calif.

2



crossed 7

feeding
spot.

channel





(see
p. 214)

8:20 lost him when he
was just under my tree
(^{hidden} ~~lost~~ by branches)

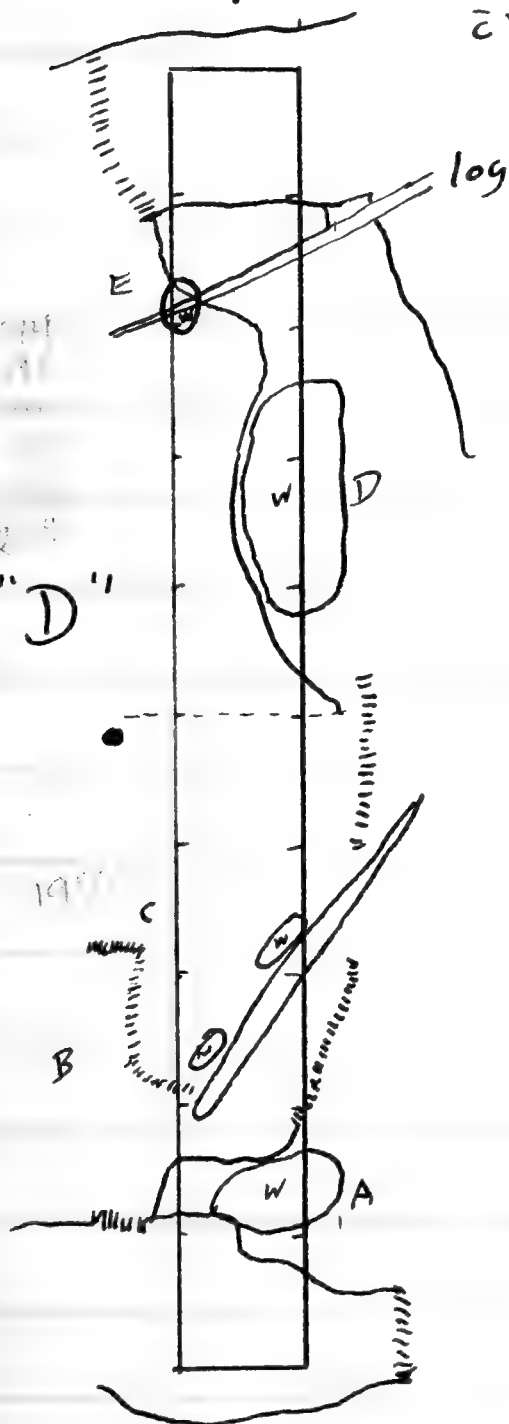
8:23 caught sight of him swimming down around "boot" where he was caught over a month ago. Disappeared in willows at edge of pond 6. 8:25 big splash below that pond 30' from where Al Cordone was fishing. 8:35 saw one in same spot + right next to Al. ^{Left} 8:35.

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Aug. 8 Sagehen Creek, 6500 ft., 3 mi. W Hobart Mills, Nevada Co., California

Upper 9:30 AM. Checked traps to find two catches: a yearling(?) just above main dam and a larger one 2 yr old(?) at crossing of dam above dead-fall. Both sexed as ♀. Yearling marked: , 2-yr. old:  Fur was clipped off on both in addition to tail-notching. Fur wasn't clipped to skin but down part way into the underfur. Cont. on willow samples

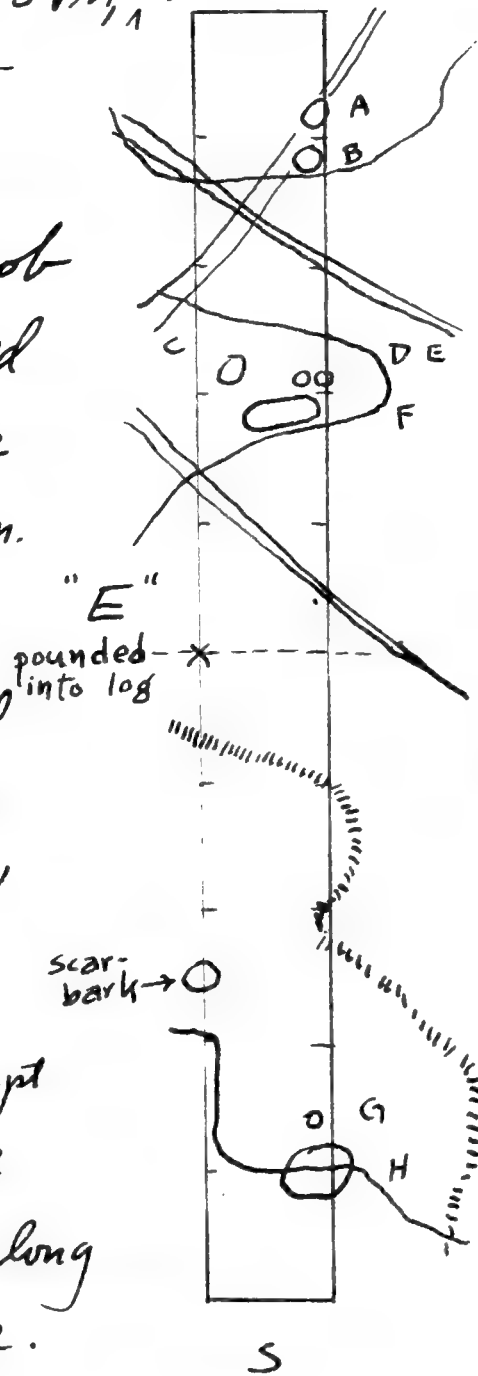
Sample D's midpt is yellow painted stake 2 1/2' NE of snag
N
after setting traps N
E painted "X". Left 5 PM



returned 7:15
to watch at
seat while Bob
Rupp watched
from OBS tree
farther down.
Saw no be-
ver tho heard
what sounded
like cutting W
of rocky slope.

8:00-8:10 saw 2 pt
buck and doe
picking way along
asp of N shore.

Left 8:30



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1954

217

Aug 9 Sagehen Creek, 6500ft, 3 mi. NW Hobart Mills, Nevada Co., Calif.

Upper Ar. 10:00. no beaver. Cutting schedule:
Set 4 traps
Saw water shrew at 12, left 12:15,
Rockslide area of road to 89 saw Beechey
ground squirrel Run across road to hole
in rocks at 3 PM. Ar. U. colony seat 7:15

D	X
1	
2	
3	
4	
5	

PM. 8:00. Scared 2 does. 7:20 2 ♂ pil-
olated warblers and a chipmunk on S shore.
8:00 doe on N shore. 8:05 a small beaver came
down stream, over a dam just below which I
had a trap set, then right over the trap with-
out getting caught, into main pond & dove
into lodge. No marks visible. 8:15 an un-
marked beaver "kit"? did exactly the

Aug 10 same. Left 8:25. Ar. 3:10 to find 3
beaver caught: kit (?) at main dam in v.
poor shape. Sexed her as ♀ & marked: (U)
Caught the "yearling" marked two days
ago: (U) at the same trap where the 2
small beaver "escaped" last night. Let
her go; she was in good shape. At upper most
trap where I made my 2 catches last
year, was a mature lactating ♀, dead &
slight bleeding at the nose. Just like the
lactating ♀ caught last year on
Aug 3. Acc. to streamside thermograph at
camp air temp was at a minimum at 6 AM
of 33°, water 42.5° at same time. Last Aug 3

	July 29	Camp	U. Colony
air	10:15	68°	
water	10:15	51°	

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Aug 10 Sagehen Creek, 6500ft, 3 mi. NW Hobart Mills, Nevada Co., Calif.

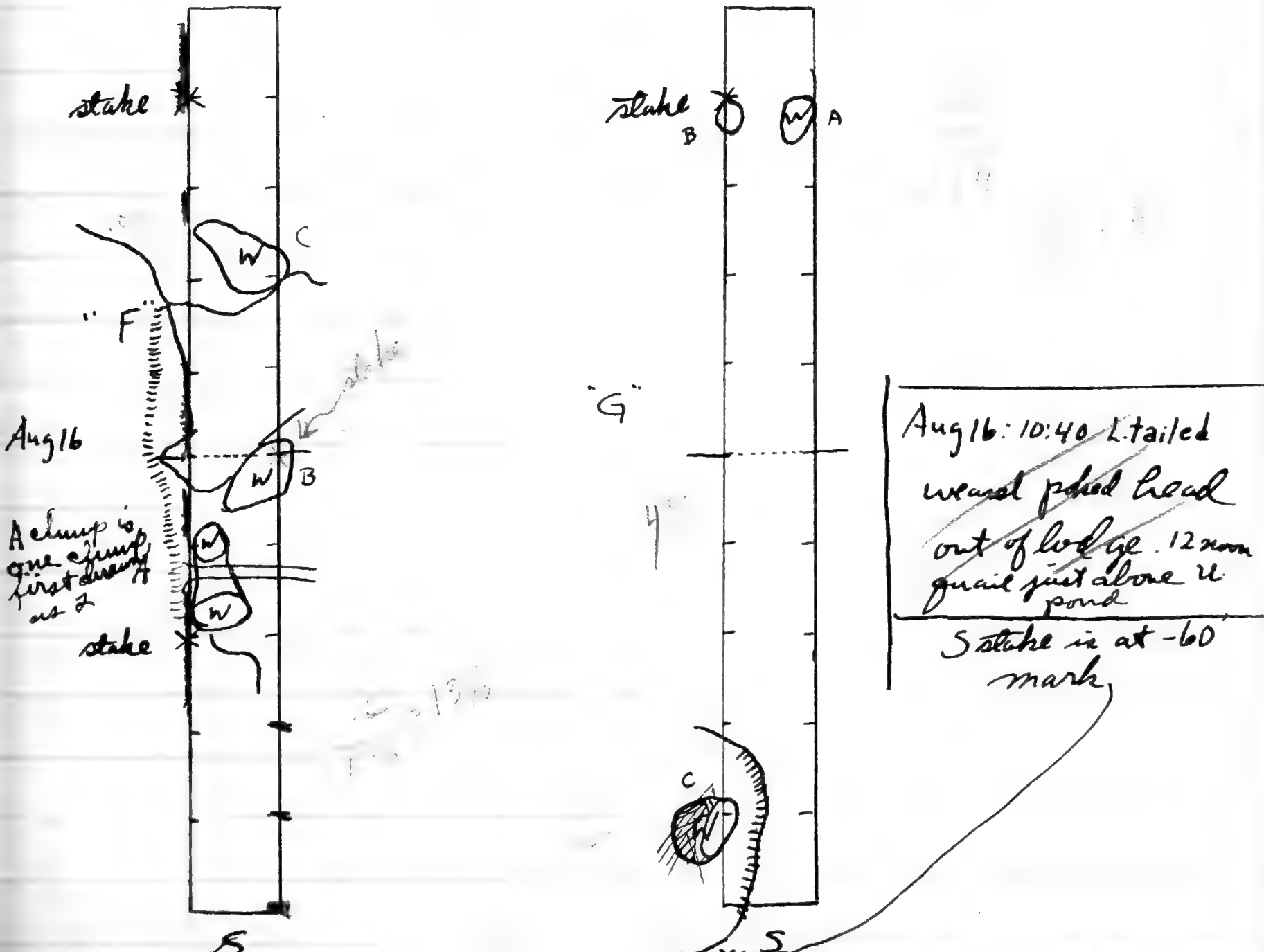
Upper

when I lost the other ♀ at R slide air temp at camp was 35.5° + water 42.5° . Since the upper colony is considerably higher than camp + Rockslide it was probably significantly colder or at least ^{as} cold.

Went back to take the ^{Kit} "prey" out of the trap & it was so weak it couldn't even bite or crawl. Carried it up the bank to where it could thaw out but kept it in shade. Had the shakes. at 4:30 I left it with some willow + asp twigs. Back at 6, expecting to find it dead, but found it gone without having eaten any of the willow or aspen.

6:15-6:25 watched E at N end of pond where dead ♀ was found after surprising "him" chewing on a $1\frac{1}{2}$ " asp log in shallow water. He paid no attention when I stood still. He soon dove into what I took to be a bank burrow but it turned out to be a tunnel connecting two parts of the pond separated by a peninsula. These 2 parts were on the same level, of course. I could see tail marks easily at 20' w/o knives + same for fur mark. In the second part of the pond she swam over to within 5' of me. ^{Left trap set.} 6:30 took dead ♀ back to camp for skinning. No embryos.

Aug 11 Sagehen Creek, 6500ft, 3 mi. NW Hobart Mills, Nevada Co., Calif.
Uppen 8:30 AM. In hills mdu on way up marmots, Microtus & Beldings abroad. at ford 8:55 flushed 9 half-grown quail from Wyethia by side of road. an adult was giving alarm call. Ar. U. colony 9:05 + the one trap was empty. Left the trap set + left at 9:25. 9:35 above ford saw what was probably myrtle warbler in an 8' l pole. yellow rump, white throat,
Aug 12 lightly streaked below. // ar 9:30 AM to check trap which was "half-fired"
Ran samples F & G for willows, Left 12:30 PM.



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1954

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16 Aug. Sagehen Creek, 6500ft, 3 mi. NW Hobart Mills, Nevada Co., Calif.

Upper. 10:40 AM \pm Mr Bingham. L. t. weasel poking head out of crevices in lodge. Noon. A bunch of quail just above the upper ford. Went on up to the site of pumping & draining. Set camera out for deer at spring draining into the mdw below Rupp's camp in late afternoon but it was set off by a chickaree.

17 Aug Camera reset for deer near yesterday's set.



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221

21 Aug Sagehen Creek, 6500 ft., 3 mi. NW Hobart Mills, Nevada Co., Calif.

Rockslide 9AM. Asp. sample D laid out. S stake is 34' from sta. 25 and 39' from the sample C stake. M stake 7' E of "the" 18" Jeffrey standing alone in the asp. Since there is continuous asp beyond 100' the sample was made 200' x 10' in size, the N stake being 8' W of an old rotting log. Left 11:45, Ar 2 PM. Kingfisher rattling down stream. Willow sample D chosen as typical willow working for this colony and, so, for the detail "availability" sample. Live twigs over $\frac{1}{8}$ " diam ($\frac{1}{2}$ pencil width) or gr larger were counted. Clumps A-E were counted but entered \bar{c} counts on clumps F-L

Upper. on p. . Left 4:40; ar U. colony seat 6:25 PM Warm & clear. A couple was fishing ponds when I arrived, the woman said that her husband had seen a large & a small beaver a couple of ponds up about 6:10. The couple left about 6:50. 7:00 spotted a spike going W thru asp. on N shore & I could see that the left antler was 8 or 10" long but the right one only 4 or 5" long. 7:20 U beaver came up over the main dam at the N end of the dam. Worked on bark at butt end of an almost-dead asp. log in the dam, chewing off the bark. Fur mark doesn't show up so

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21 Aug Upper Sagehen Creek, 6500 ft, 3 mi. NW Hobart Mills, Nevada Co., Calif.
well but the tail notches appear to be as clear as the day made & show up especially well under water. For several minutes she scratched fur on dorsal surface of tail "peduncle", then at anus & then at shoulder & the hind foot. 7:25 she went ashore near lodge and began nibbling on bark of a recently felled 12" asp. She got a chip from this, bringing it to shallow water to work on. Cutting heard from vicinity of rocky slope. Heard & saw chickadee. 7:35 beaver went ashore again briefly, then back into the pond & headed upstream. 7:40 a bit noticed swimming in main pond - probably had come from the lodge. Had no marks. Went to an alder thicket to begin cutting, then swam about in pond briefly before going ashore at same spot the larger beaver had just used. Chewed on asp. briefly, worked on morsel in shallow water, then returned to its alder patch across the pond. At 7:45 I noticed a larger beaver swimming about in deadfall pond but it was too far away to tell whether it was old { } or not. At 7:50 the bit left alders, swam across pond, crawled over the dam near S end & disappeared downstream. 7:55 loud, terrified "beat" came from

J. G. Hall
195421 Aug Sagehen Creek, 6500 ft, 3 mi. NW Hobart Mills, Nevada Co., Calif.

Upper

fir thicket directly opp. S end of dam but I could see nothing. Immediately a deer was glimpsed bounding at full speed thru the brush towards the thickets. No further action. Left 8:05

22 Aug Left main camp 10:45 & at the shepherd's Rockslide rd saw 3 does & one knob buck. Cited unconcerned & would spar in the front legs occasionally. Farther down, at Rausey's old camp site, came on a doe & two fawns. One fawn got stranded on S side of road while the doe & the other one were on N side. Stranded fawn acted confused, jumping & running about, finally crossing to N side way ahead of our car. Reached Rockslide 11 AM, saw 2 does down among the willows, saw kingfisher rattling off and a Cooper's hawk perched in the top of a l'pole & screamed from time to time for about 15 min. Finished ~~now~~ counting live willow twigs of sample D. Table below includes yesterday's work

Chump	new use	live twigs %	See diagram
A	9	61	p. 195.
B	10	21	
C	14	52	Left 6:15
D	20	110	
E	3	62	
F	58	306	
G	12	100	
H	6	87	
I	0	7	
J	22	50	
K	92	90	
L	31	37	
	277	983	

$$\frac{983}{277} = 3.55$$

$$\frac{277}{1260} = 22\% \text{ use}$$

$$\frac{22}{50} = 0.44\% \text{ per day}$$

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224

24 Aug. Sagehen Creek, 6500ft, 3 mi. NW Hobart Mills, Nevada Co, Calif.

Lower 9:00 AM. Cool, hazy cirrus clouds & a light breeze. Cooper's (?) hawk at upper end of new section. 15" Jeffrey partly girdled. 10:10 saw quite a large hawk flying downstream about 50' overhead, about size of red-tail tho' no red visible. 10:30 kingfisher at the main pond. Cutting schedule:

North Side						South Side					
New			old			New			old		
D	X	L	D	X	L	D	X	L	D	X	L
1			1			1			1		
2			2			2			2		
3			3			3			3		
4			4			4			4		
5			5			5			5		
8	1					9	1				

Good idea would be to age a representative sample of these sprouts on the S slope. Saw an olive colored flycatcher in asp + fir, ^{2 poles} sand, probably Wright's. This was 50' up from the stream. Beaver on south side have gone 40' upslope from the old RR grade to get fir & almost as fast to get asp. All dams on new section of the colony on S side show new work & are higher. By mid morning skies had clouded over heavily & high winds & a drop or so of rain, then cleared up some staying windy. 2 left at ~~11:40~~ 12:20 after a little rain at 11:40.

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Aug 24 Sagehen Creek, 6500ft., 3 mi. NW Hobart Mills, Nevada Co., California.

Rockslide Middle Obs. tree 6:25 P.M., strong breeze + a clear sky. Noticed 2 kingfishers chasing each other noisily about ponds at upper end of the colony. 7:15 a large, unmarked beaver came up the N channel, almost to the favorite crossing and dove into the bank burrow there. 7:20 a large beaver swims from near this burrow, going down stream via N. channel. 7:30 a medium-small one seen swimming near entrance to this burrow but I soon lost sight of him. 7:35 medium-small one comes up over crossing, comes ashore at lodge to cut willow & which it dives. At 7:40 same or v. similar beaver leaves lodge, goes down-pond, up-pond underwater and cuts willows just above the crossing. Swims across pond to cove just above lodge, hauls out briefly, only to dive into lodge at 7:45. Emerges a couple min. later to cruise in pond, then comes ashore near "little red" to cut willow for sometime. at 7:55 it dove near lodge but reappeared & cruised. Dove with a splash and something moved in the brush. Dove again & again near lodge. I climbed down at 8:00. At 8:10 as I approached the main dam a "monster" beaver went up over the dam & into the pond & willow cutting.

Aug 25 Sagehen Creek, 6500ft, 3 mi. NW Hobart Mills, Nevada Co., Calif.

U. colony 9:30 A.M. chilly, overcast which gradually cleared to "haze". Chose sample "D" for intensive willow census.

Clump	$\frac{1}{2}$ pencil diam. or more	
	new use	unused
A	34	240
B	2	62
C	0	71
D	5	470
E	3	246
Total	44	1089

This represents
 $\frac{44}{16} = 2.75$
 days' work = 2.75
 twigs/day.

Left 11:45, returned 2:45 to set 4 traps + left

Aug 26 again at 3:45. Ar. 10 AM to find one trap set off but empty, one set off ^{at dam up from dead fall} \bar{A} in it and a dead bit in one of the two traps set at upper dam where ad. ♀

Aug 27 died earlier in season. Ar. 3 PM. Location of last year's asp. sample markers:

A - location of N stake?, B - OK, C - N stake probably OK but needs checking, D - OK, E - OK, F - OK but map location of N stake is wrong, G - OK. A 4" tree marked "A" in 1952 has just now been felled. Also noted that bark of trees cut up to a yr. ago may be eaten. Marking schedule:

D	X	L
1	 (NONE)	
2		
3		
4		
5		
6		
7		

Left 5:25, on way down saw red-tail in top of tree just upstream from ford. Weather partly cloudy all afternoon with a good breeze.

feeding
→

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Aug 28 Sagehen Creek, 6500 ft., 3 mi. NW Hobart Mills, Nevada Co., Calif.

U. colony Started the first re-run of last summer's aspen samples. Since I didn't take the diameters last summer, I extrapolated back to what they then were. Think this is fairly accurate. This summer every tree was marked and in some cases trees not included in last year's plot (due to poor control of the mapping in the field) were included in the plot this year (or vice versa). In these cases, last year's record is amended to correspond with what it would have been on this year's plots. The differences between the two years are relatively small in this respect.

Sample "A" ^{a 4-rock monument at 1/2 way mark. as reconstructed it does not run in a perfectly straight line}

	1	2	3	4	5	6	7	8	9	10	
Trees in Plot	2	1	7	1	3 ⁺	0	1	3 ⁺	6 ⁺	0	by
No trees cut	1	0	0	0	0	0	0	0	1	0	1
Diam. un-cut trees in inches	14	5	12, 10, 10 6, 6, 5, 3	13	4, 2, (2)	0	2	3, 2, 2	4, 3, 3 3, 2		9
Diam. of cut trees	4	0	0	0	0	0	0	0	2	0	5
											3
Trees in Plot											1
No trees cut in last year	0	0	1	0	0	0	1	1	3	0	9
Diam. un-cut trees	14	5	10, 10, 6, 6 5, 3	13	4, 2				3		5
Diam. of newly cut trees			12				2	3	4, 3, 3		4
Diam. trees dying in past yr.					2"			2 2	2		

omitted from 1954 report

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Aug 28 Sagehen Creek, 6500ft, 3 mi. NW Hobart Mills, Nevada Co, Calif.

Upper colony Sample "B" *unpublished 11/6/54*

	Square Plot #										
	1	2	3	4	5	6	7	8	9	10	
Total trees		1		0	1			0	0	0	B _y
No. cut	1	0	1	0	0	0	0	0	0	0	19
diam. of standing	5, 6, 7	10	6	0	13	11, 11, 5	2, 3	0	0	0	53
diam. of cut	12	0	2	0	0	0	0	0	0	0	
No. trees cut in year	0	0	1	0	0	1	0	0	0	0	19
diam. of above trees	0	0	6	0	0	11	0	0	0	0	54
diam. of trees dying in yr.	0	0	0	0	0	0	0	0	0	0	

mid-point of line about ~~half way~~ 6' SW. of half-cut thru beaver stump (Kensingers sawed it only half way thru).

Sample "C"

	square plot #										
	1	2	3	4	5	6	7	8	9	10	
Total trees		1	0	1				0	0	0	1
No. cut by 1953		1	0	1			0	0	0	0	9
diam. standing	0	3	0	0	4, 4	0	6, 5, 3, 3	0	0	0	53
diam. cut	4, 4, 7	5	0	5	3, 5	3, 4	0	0	0	0	
No. cut in year	0	1	0	0	1	0	0	0	0	0	1
diam. of above	0	3	0	0	4	0	0	0	0	0	9
diam. trees dying in yr.	0	0	0	0	0	0	0	0	0	0	54

Some of the figures for "total trees" were amended from last year's figures on the basis of where the cut of recumbent trees was or, in case of standing trees, would be:



In this case dia-

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Aug 28

Sagehen Creek, 6500 ft, 3 mi. NW Hobart Mills, Nevada Co., California

Upper.

grammed the tree figured would be counted "in" although last year it would have been counted "out" since the base of the tree was out. The location of a tree as far as the beaver is concerned (which is what we're trying to measure here) is the location of that part of the trunk a foot to eighteen inches above the ground and not necessarily the base, although the two coincide for trees growing vertically. I left at 4:30 for meeting with Dick Gard farther up basin. After crossing the upper ford I took the road south. Saw a beechey's mi. above the ford; had seen one earlier back at the colony. At the fork in the road surprised in ^{deer} Ceanothus, tracks quite numerous. Also saw a marmot under some big firs. About another $\frac{3}{4}$ mile came on Dick's jeep parked so decided to follow roughly up the S slope parallel to but on E side of the main little stream which becomes Sagehen Creek proper after confluence to a half-dozen little feeders. Much of this slope impenetrable Ceanothus and I got off the stream & headed straight up as best

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Aug 28 Sagehen Creek, 6500 ft, 3 mi. NW Hobart Mills, Nevada Co., Calif.
as was possible. I made a wide
circle to high up on the ridge where
there is no more *Ceanothus* and where
the little tribes originate ^{under} as clumps
of alder in amongst the firs. Cut
E and came down along one of these
alder-choked draws harboring an
intermittent tribe. Secured a 4 pt
+ 2 pt, both within bow range, a spile
& 3 or 4 does on my way down. Saw a
hawk & 3 more beebees also. Came
down & hit the left hand fork of
the road (I'd taken the right hand
fork to get to Wick's Jeep). Returned to
jeep at 7, Wick back at 7:30 We drove
up to "head of navigation" which is ⁱⁿ a
meadow a couple of hundred yards
up from Hoffmann's shack, & camped
for the night. Quite warm. After breakfast
I headed down to colony again, encountering
large flocks of juncos, mostly juv., on way.
V. colony. Worked on asp. samples D-G until
about 1:30 when Wick came by & picked
me up. (Data on samples next page.)

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Aug 29 Sagehen Creek, 6500ft., 3 mi. NW Hobart Mills, Nevada Co., Calif.

U. colony Sample "D"

Square plot #

	1	2	3	4	5	6	7	8	9	10	
Total trees	HHH II	HHH	HHH	HHH IIII	HHH HHH I	HHH I	III	HHH HHH I +	I	III	
No. cut by '53	0	0	0	0	0	0	0	0	0	0	1953
diam. standing	4, 4, 3, 3, 2, 1, 1	3, 2, 2, 1, 1			4-3-3-3 2-2-2-2 1-1-1	3-2-2 2-2-1	3-3-2	5-4-3-3 3-2-2-2 2-1	4	4-3-2 2	
diam. cut											
No cut in year	HHH	IIII			0	0	0	II	0	0	1954
diam. of above	4, 3, 3 2, 1	3, 2, 2, 1						3-2			
diam. trees dying in yr.											

Check
interim
col. 1954
+ 8

Sample "E"

Square plot #

	1	2	3	4	5	6	7	8	9	10	
T. trees	HHH HHH HHH	HHH HHH III	HHH III	III	HHH III	I	IIII	III	HHH I	III	1953
No. cut by '53	IIII	I	0	0	0	0	0	0	0	0	
diam. standing	7-6-4 4-2-1	3-3-2-2 2-2-2-2 2-2-1-10	4-3-2 2-2-2 2-1	11-2-1	4-4-3 2-2-2 1-1	1	3-1 1-1	2-1-1	5-4-4 4-2-2	4-3 2	
diam. cut	7-5-3 2	9	0	0	0	0	0	0	0	0	
No cut in year	1	1	0	0	0	0	0	0	0	0	1954
diam. of above	2	2	0	0	0	0	0	0	0	0	
diam. trees dying in yr.											

Sample "F"

Square plot #

	1	2	3	4	5	6	7	8	9	10	
T. Trees	IIII	III	HHH I	II	0	HHH I	0		HHH III +	III	1953
No. cut by '53	0	1	1	0	0	0	0	0	0	0	
diam. standing	6-2-1-1	2-1	2-2-2 2-1	1-1	0	5-3-3 3-2-2	0	2-2-2 2-1-1	4-3-3-3 2-2-2 1	6-6 4	
diam. cut	0	2	1	0	0	0	0	0	0	0	
No. cut in year	0	1	II	1	0	0	0	0	0	0	1954
diam. of above	0	1	2-1	1	0	0	0	0	0	0	
diam. trees dying in yr.									2		

Check
interim
col. 1954
+ 8

J.G. Hall
1954

Aug 29 Sagehen Creek, 6500 ft, 3 mi. NW Hobart Mills, Nevada Co, Calif.

Upper

Sample "G"

square plot #

	1	2	3	4	5	6	7	8	9	10	
T. Trees	HHH HHH	HHH	1	0	HHH	11	1	0	0	0	1
No. cut by Dam. '53	11	0									1
stand.	4-4-4-4	4-3-3-3			4-4-4	3-2	3				5
Diam. stand	3-3-3-3	3-3-2-2	2		2-2						3
cutting	3-3-2-2	2-1									
Diam cut	2-1-1										
in year	3-2	0									
No. cut in	0										1
year											9
Diam. of	0										5
above											2
Diam. of	1			1							
those dying											

Sept 5 4PM. set 4 traps: one at main dam, one in chan-
 R'slide nel where "scarback" was caught, one near OBS
 lodge and one at the high dam just above
 the lowest dam. Left 5 PM. Back at 10 PM to
 find "scarback" trapped exactly where he
 had been caught on night of July 19 or early
 AM of the 20th. Absolutely no evidence of
 brand on tail and hair on back had al-
 most completely obscured "scarred" areas which
 would be a v. poor field mark now. Resexed as
 ♂ and marked tail: (U). Noticed scent pile

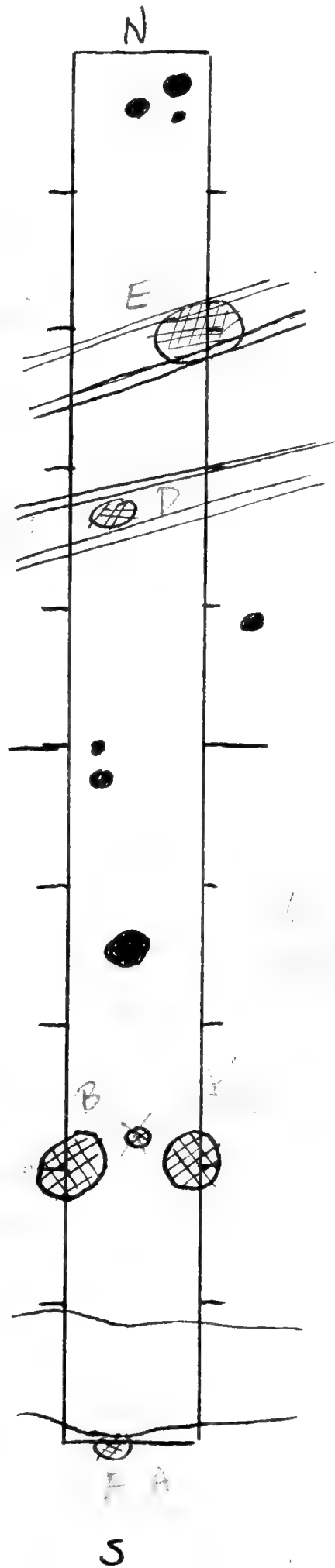
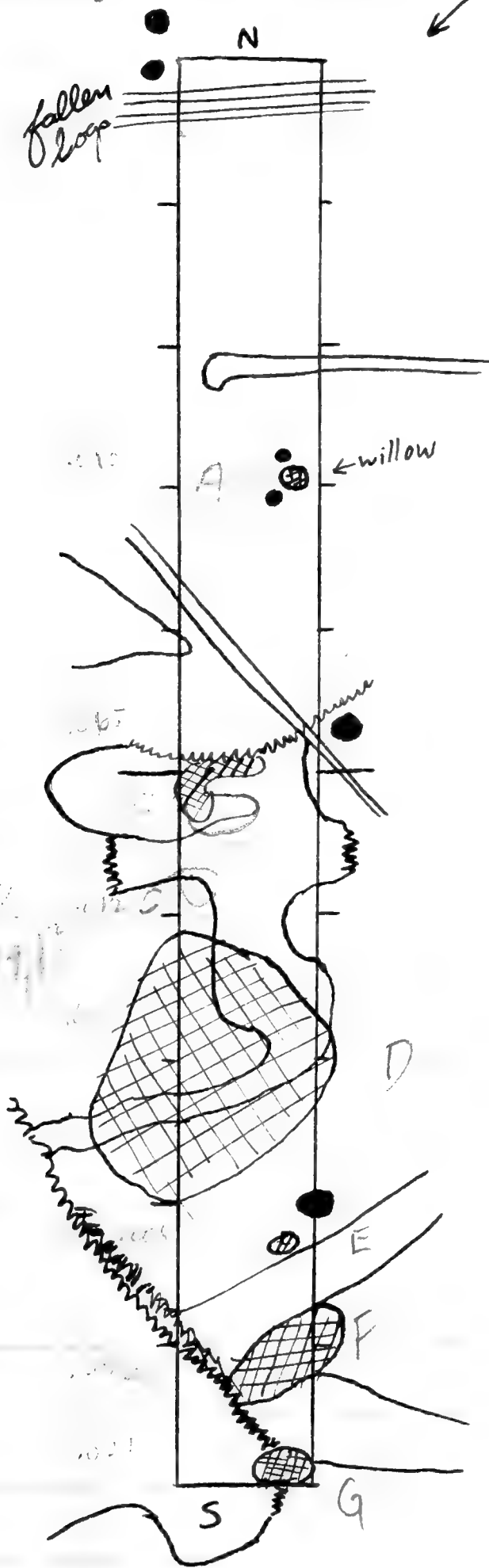
Sept 6 by OBS lodge, // Reset all 4 traps + checked later
 that night but no luck //

Sept 7 ar. 9:20 - Bob Rupp. sky overcast. We noticed a
 Lower. beaver swimming in the main pond. Started
 on willow samples. Sample A: N upstream cor-
 ner marked - makeshift stake - "A" written on
 it. S up stream marked by a metal stake in

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Sept 7 Sagehen Creek, 6500ft., 3 mi. NW Hobart Mills, Nevada Co, Calif.

Lower middle of the little pond. The upstream mid-point is 10' upstream from a gigantic, tall, straight, dead snag & is marked with a metal stake. "A" Sample "B"

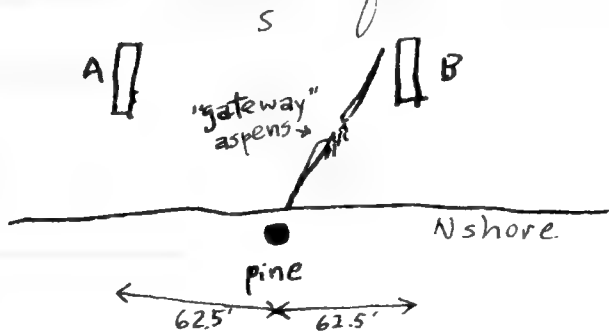


no. end of sample entirely over water.
mid point 5' NNW of 18" dead l. pole "leaner" snag which has a red "B" painted on it. Stake is 2' W of a 12" dead pine marker stake is make-shift & paint & no.

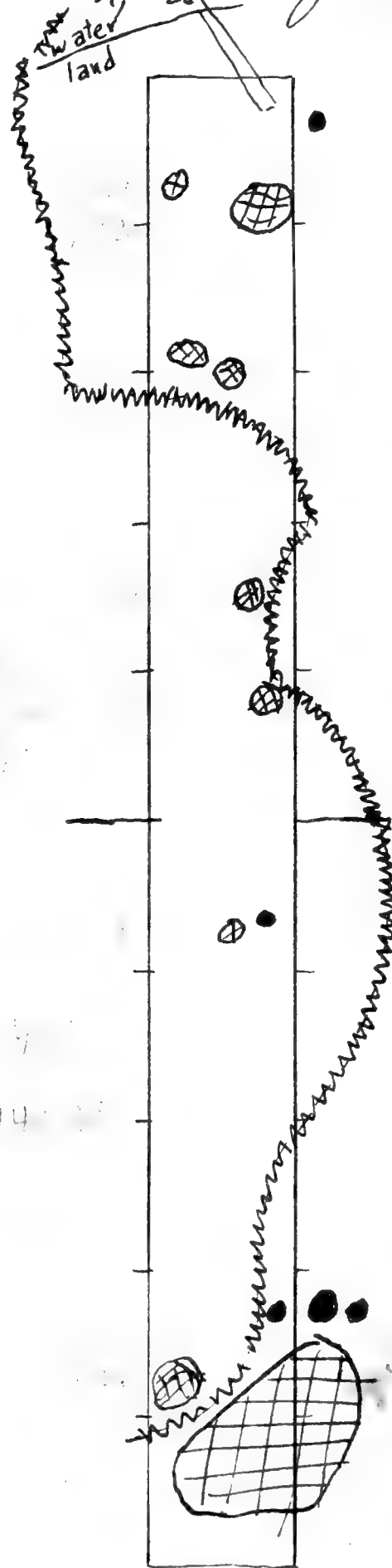
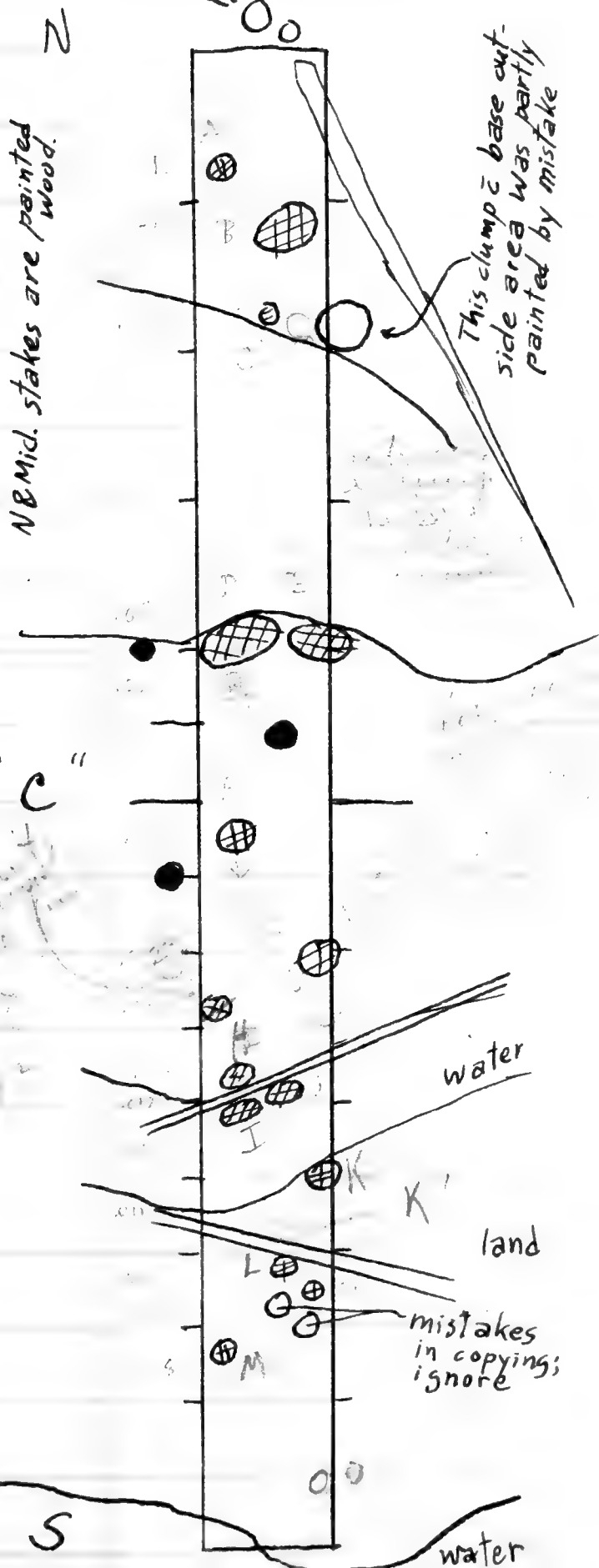
sections 2-9 v. marshy

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Sept 7 Sagehen Creek, 6500 ft, 3 mi. NW Hobart Mills, Nevada Co., California
Lower Location sketch for willow samples A & B:



For C & D samples mid-point is big black stump in shallow water just down hill from ruins of an old building, which, in turn, is E. of the log house.



N stake is makeshift
Mid, upstream stake a 3", unmarked pole out in the pond
S stake is makeshift, lettered in pencil & painted.
Left 4:30 PM.

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Sept 7 Sagehen Creek, 6500 ft., 3 mi. NW Hobart Mills, Nevada Co., Calif.
R'slide Ar. 5 PM, took Widi's temps which were: 54, 54, 58, 58 & 60°. Reset the 4 traps. Checked 10 PM - no luck.

Sept 8 Lower Started on asp. samples. Used thumb-tack method for 1st time
Sample A

	Plot #										
	1	2	3	4	5	6	7	8	9	10	
T. trees	I	II	III [⊕]	0	0	HHH [⊕] II	0				
No trees cut by '53	0						0	0	0	0	1
Diam. standing	3	3-2	2-2-1			3-3-3-3 3-2-2-2 2-2-1					5
Diam. cut	0										3
No trees cut in yr.	0										1
Diam of above	0										9
Diam of dead in yr.	0	0	1	↓	↓	2	↓	↓	↓	↓	5

(Blaze & tack used for trees in odd-numbered sections, just tacks for those in even-numbered.)
Sample B

	1	2	3	4	5	6	7	8	9	10	
T. Trees	III [⊕]	I [⊕]	I	0	I [⊕]	0	0	HH [⊕]	0	III	1
No. cut by '53	III	0	I	0	0	0	0	0	0	0	9
Diam. stand.	2	1	0	0	1	0	0	2-1-1 1-1	0	2-2-2 1	5
Diam-cut	4-2-1	0	1	0	0	0	0	0	0	0	3
No cut in yr	0	0	0	0	0	0	0	II	0	III	1
Diam of above	0	0	0	0	0	0	0	1-1	0	2-2-1	5
Diam dead in yr.	0	1	0	0	1	0	0	1-1	0	0	4

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Sept 8 Sagehen Creek, 6500 ft, 3 mi. NW Hobart Mills, Nevada Co., Calif.

Lower Asp. Sample "C"

	Plot #										
	1	2	3	4	5	6	7	8	9	10	
T. Trees	HHH III	HHH ⊕	III	HHH	III	HHH	III ⊕	1	0	0	1
cut by 53	HHH	1	0	1	0	1	II	0	0	0	9
Diam. standing	5.5-4 4	4.4 3.2	3.3-2	2.2 1.1	3.3-2	4.2 2.2	3.2	1	0	0	5
Diam. cut	3.3-3 2.2	2	0	2	0	1	2.2	0	0	0	3
No. cut in yr.	III	II	II	III	II	III	0	0	0	0	1
Diam.	5.5- 4.4	3.2	3.2	2.1-1	3.2	4.2-2	0	0	0	0	9
Diam dead in yr.		4					2				5
											4

Sample "D" (Didn't agree at all w 1953 figures tho'
plot was relocated early enough)

	1	2	3	4	5	6	7	8	9	10	
T. trees	HHH HHH II	III	HHH	III	HHH	II	0	0	0	0	1
No. used by 1954	HHH HHH II	II	III	III	HHH	II	0	0	0	0	9
Diam stand- ing	0	1.1	1	0	0	0	0	0	0	0	5
Diam. cut	4.3-2.2 2.1-1.1 1.1-1	1.1	1.1-1.1	3.2-2 1	3.3-3 3.1	3.1	0	0	0	0	4

Sample "E"

	1	2	3	4	5	6	7	8	9	10	
T. Trees	1 ⊕	0	0	III	0	0	0	II	II	0	1
Cut by 53	0	0	0	0	0	0	0	0	0	0	9
diam. standing	1	0	0	2-2-1	0	0	0	2-1	1.1	0	5
diam cut	0	0	0	0	0	0	0	0	0	0	3
Cut in yr	0	0	0	1	0	0	0	0	1	0	1
Diam.	0	0	0	2	0	0	0	0	1	0	9
Diam dead in yr.	1								1		5
											2

Left 5:30

Lower Asp. sample F

	1	2	3	4	5	6	7	8	9	10	
T. Trees cut by '53	//	I	I	I	III I	III	III	O	IIII	III	I
Diam standing	1,1	I	I	I	III 2,1 I	IIII ?	II 3,2,1		1,1,1 I	3,2,1, 1,1	9 5
Diam. cut		I	3	2	2,2, 2	3,3, 2,1	2,2				3
No. cut in yr.					III				I	I	7
Diam.					2,2,2				I	2	9 5
Diam dead in year						?				I	4

J. G. Hall
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236

Sept 9 Sagehen Creek, 6500 ft., 3 mi. NW Hobart Mills, Nevada Co., Calif.
R'slide 4 PM. Set 3 traps and left. Came back at 6. Saw a deer at the main pond 6:15. Obs. tree 6:30 scared doe & twin fawns which have almost lost spots completely. 6:45 saw medium-sized beaver floating in the main pond. No marks. Then spotted a second, smaller one swimming under water. Tail not marked & 2 lost sight of him. 1st one still floating. Second one reappeared & they both float idly & swim slowly. 6:55 smaller one entered a cove, & came ashore to feed on willow while the larger one disappeared over crossing to the N fork & was lost to sight. Smaller one fed in another cove; fed on the very smallest willow shoots, finer than the ones I mark on my willow samples. 7:00 swam up to blasted dam, then back to pond, floated fed on willow within reach of the water. 7:05 came ashore 8' from water to cut willow, took cutting to shallows to eat. 7:10 dove into water, swam to channel N of the isle underwater & disappeared. Saw the same 3 deer moving back towards me from downstream where I'd scared them. 7:15 noticed commotion in water N of isle

J.G. Hall
1954

237

Sept 9 Sagehen Creek, 6500 ft., 3 mi. N.W. Hobart Mills, Nevada Co., Calif.
R slide but couldn't make the beaver out. 7:20 a small beaver (same one?) seen swimming under water from isle & comes to main pond, diving at 7:23. 7:24 saw beaver plop over the falls 100 yds upstream & head toward the blasted dam & pond I'm watching. Turns out to be scarback. He swam around a little just upstream from S dam before entering pond proper and diving into lodge. Couldn't get a good look at his tail. 7:30 deer comes downstream toward the doe & 3 fawns, 2 of which are light brown like the doe, the other being gray. The gray one has a darker dorsal tail line than the doe & very dark black inside ear-borders. 7:40 a beaver went over crossing but I didn't notice it in time to tell if it was marked. Must not have been, tho; as at 7:41 Scarback & another beaver left lodge & swam to N. channel. A minute later an unmarked beaver swam down-pond, followed by scarback who then went over crossing. Still couldn't tell about his tail. Does 3 fawns approaching in single file. The other doe still under my tree. Left at 7:45. Weather's been warm all day.

J.G. Hall
1954

Sept 10 Sagehen Creek, 6500 ft, 3 mi. NW Hobart Mills, Nevada Co., Calif.
R'slide Checked the 3 traps at 7:15 AM but no catch. Saw 6 deer on way. Made 1954 tally on asp sample A

	1	2	3	4	
Total trees			* 		0 →
Cut by 53					9
Diam. standing	0	1.1	1.1.1.1.1	1	5
Diam cut	1.1.1.2	1.2.2	1.1.1.2 3.3.3.4	1.1.2	3
No. cut in yr.	0	0	0	0	1
Diam					5
Diam dead in yr.					1

* this corrects the 10 listed in 1953 tally, see p. 145
columns 3 & 4 have been completely revised
Started a "sprout" tally this year.
counted & plotted all live sprouts in each 10' square plot of each asp. samples.
Those living sprouts of less than 1/2" diam were counted since those larger than 1/2" are included in 1" tree class.

Sample A - sprouts

1	2	3	4
A-7 B-5 C-28 D-11 E-2	A-5 B-4 C-16 D-8 E-15 F-2	G-2 H-4 I-10	A-6 B-12 C-17 D-20 E-6 F-6

c is really 2 groups
c is really 2 clumps

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1954

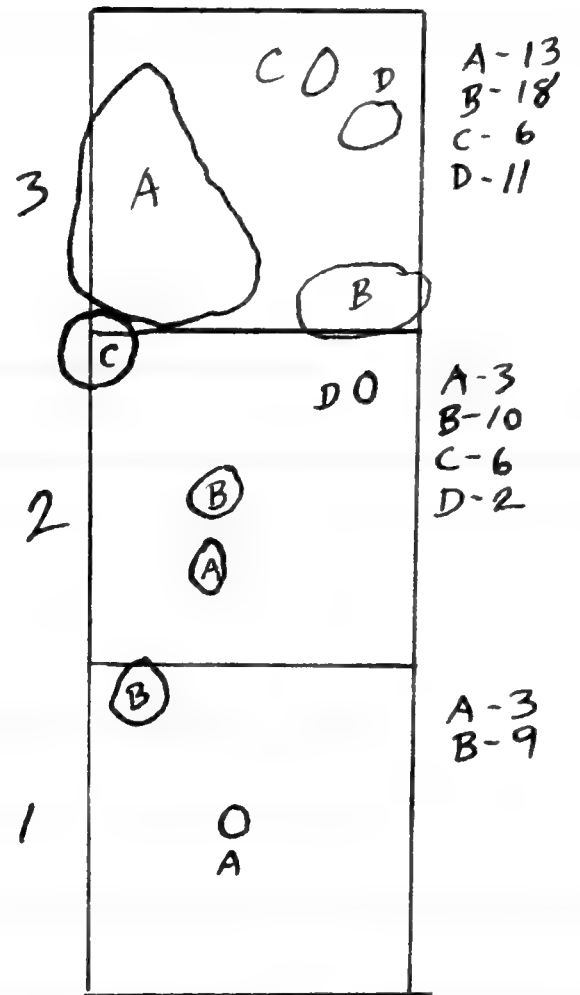
239

Sept 10 Sagehen Creek, 6500ft, 3mi. NW Hobart Mills, Nevada Co., Calif.

R'slide asp. sample B. Also amended from 1953 tally; see p. 145

Sprout count:

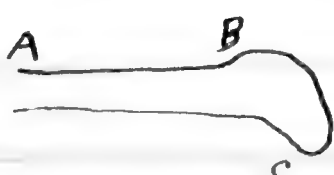
	1	2	3	4	
Total trees	HHH HHH	///	HHH HHT HHH	0	1
Cut by '53	HHH HHH	///	HHH HHT H		9
Diam. stand.	0		1-1-1		5
Diam cut	1-2-22 2-2-22 3-3	1-4-7	1-1-1-1-1 2-2-2-2 3-4		3
No. cut in yr.	0	0	0		1
Diam.					9 5
Diam dead in yr.					4



asp. sample "C" (see p. 147 to compare this year's corrections of last year's count)

	1	2	3	4	5	6	7	8	9	10	
Total trees	///	///	HHH	HHH ///	///	///	HHH	HHH HHT	HHH	HHH	1
No. cut by '53	///	1	HHH	HHH	///	///	///	///	///	1	9
Diam stand.		1	0	1-1-1	0	1	2-3-5	1-2-2-2 2-3-3	1-3-3	2-2- 3-3-3	5
Diam cut.		3	2-2-2 3-3-4-4	2-2-2 3-5	1-3	2-3-3	2-3-3	1-1-3-3	1-2-2	2	3
No cut in yr.	0	0	0	0	0	0	///	///	///	///	1
Diam.							2-3-5	2-2-3	3-3	2-3	9 5
Diam dead in yr.											4

next p. for sprout tally. at 5:30 PM
which's water temps were: Lowest dam: 55°

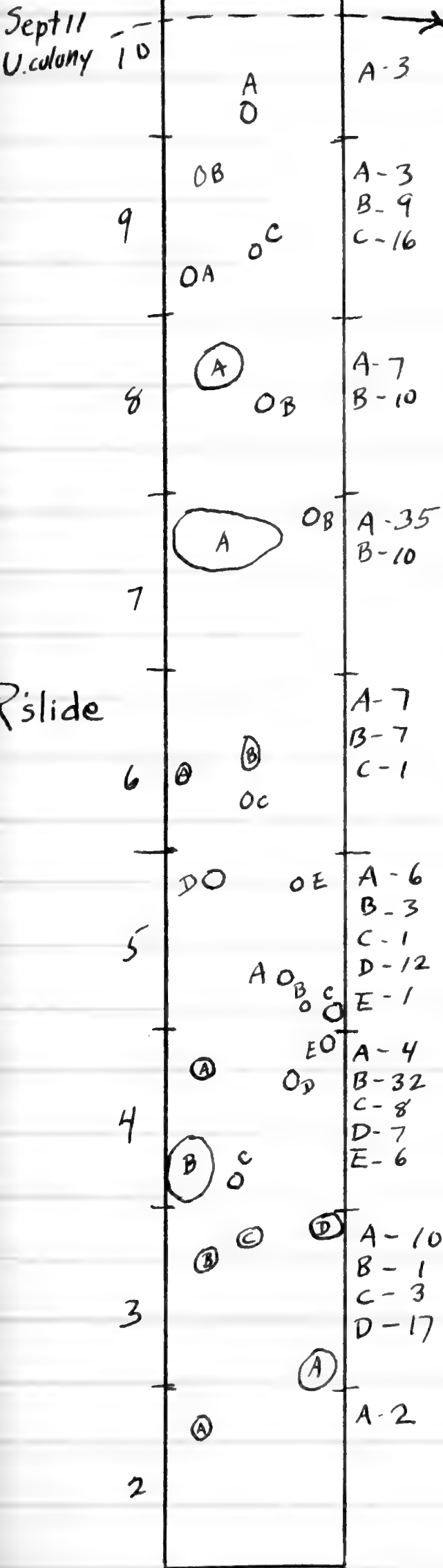


A-58°
B-61°
C-55°
at pond #13-58°

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1954

Sept 10 Sagehen Creek, 6500ft., 3 mi. NW Hobart Mills, Nevada Co, Calif.

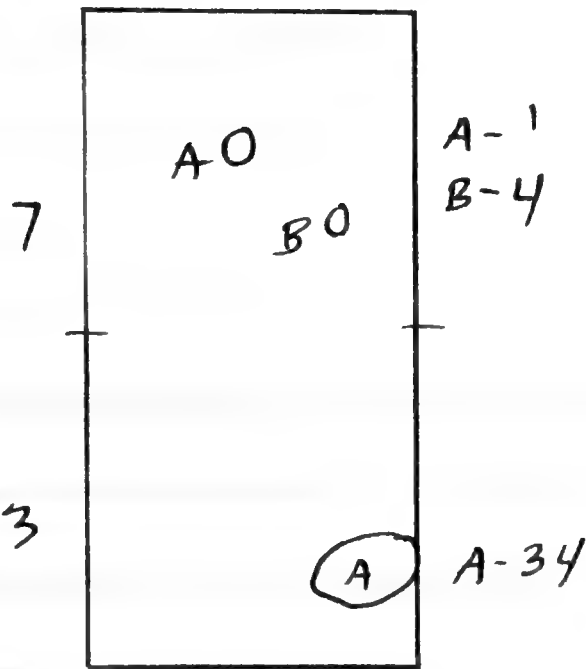
R'slide Sprout tally for sample "C":



Sept 11 U. Colony Ar. 10:45 AM. Windy & scattered cumulus clouds. Marked trees, left at noon. Marking schedule:

D	X	L
1	HTT II	
2	HTT HTT II	
3	III	
4	IIII	
5	I	
6	I	
10	I	
15	I	

Ar. Rockslide colony 2:15 PM. Ran asp sample D & set 4 traps by 4 PM. Rechecked 10 PM. no luck. Sprout tally for sample "D":



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241

Sept 11 Sagehen Creek, 6500ft, 3 mi. NW Hobart Mills, Nevada Co., Calif.

R'slide Asp. sample D.

	1	2	3	4	5	6	7	8	9	10	
Total trees	I	III	HHH III 15	HHH I	HHH I	HHH III	HHH II	III	0	0	I
No. cut by '53	0	II	II	0	0	0	0	0	0	0	9
Diam. stand.	3	3	1.1.1.1 2.2.2.2	1.1.1 2.3.3	1.1.2 3.3.3	1.1.1 2.2.2.2 3.4	1.1.1.1 3.3.4	1.1.2	0	0	5
Diam. cut.	0	2.2	3.1	0	0	0	0	0	0	0	3
No. cut in yr.	I	0	HHH III	II	HHH	HHH	0	I	0	0	1
Diam	3	0	1.1.1.1 2.2.2.2	2.3	1.1.2 3.3	1.2.2 2.3	0	2	0	0	5
Diam dead in yr											4

Sept 12 Ar. lower colony 11:00 A.M. warm & sunny. At 12:10 took shot #2 from burnt stump between 16 & 18 (same position as for a shot taken Sept 9, 1953). 12:15, "hole" in second pond ~~up~~ above the main dam on N side had about 5 fish in it compared to 15 seen in midafternoon - Bob Rupp on Sept 8. Thought on asp. sampling - although the location of these was not as random as that of the willow samples, it they were usually picked to run thru survey points which were picked fairly ^{sys-}randomly since they were placed an average "visible" distance apart, suited to map-making & not determined by distribution of aspen or willow.

J.G. Hall
1954

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Sept 12 Sagehen Creek, 6500ft, 3 mi. NW Hobart Mills, Nevada Co., Calif.
Lower Marking schedule:

New						OLD					
North			South			North			South		
D	X	L	D	X	L	D	X	L	D	X	L
1			1	HHH HHH HHH I		1	II		1	III	
2	I		2	HHH HHH HHH HHH		2	II		2	I	
3	II		3	I		3			3		
4	II		4			4	I		4	III	
5	II		5			5			5	I	
6	I		6			6			6		
7			7			7			7	I	

Birds: Audubon warbler, Empidonax, chickadee, junco, kingfisher, creeper, red-breasted nut hatch. At 12:30 obs. pair of kingfishers chasing each other around & around 40 or 50 feet above pond. Lasted 10 minutes. Bird in the lead rattled & occasionally gave a "quack" call new to me. Ran asp. sample "E" which is new as of this season. It goes from a 1" asp stump in shallow water about 15' downstream from the shack & "barber-poled," to makeshift stake and monument at 60' mark.

	1	2	3	4	5	6	7	8	9	10
Total trees	HHH III 8	HHH IIII 5	IIII 4	HHH IIII 9	0	HHH II 7	0			
No. used by '54	1	II	I	HHH I	0	III				
Diam. not stand.	3.3.4 4.5.5.7	1.2.4 5.5.5.6	3.5.7	1.3.6	0	3.4.4 4				
Diam. cut	1	1.1	4	2.3.3 4.4.5	0	3.4.4				

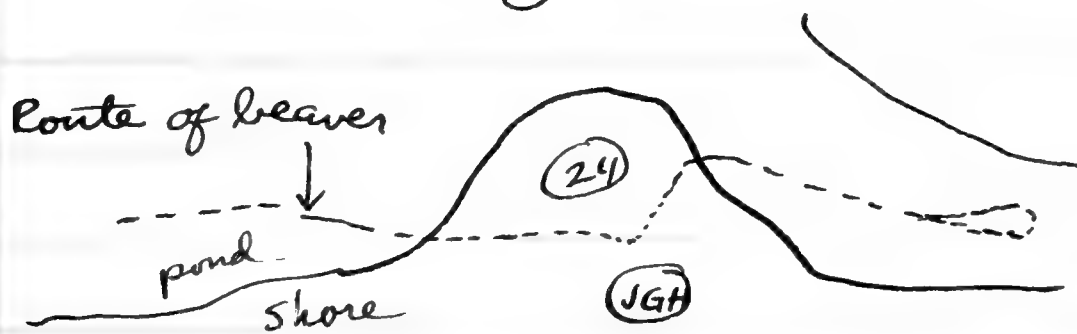
J.G. Hall
1954

243

Sept 12 Sagehen Creek, 6500ft, 3 mi. NW Hobart Mills, Nevada Co., Calif.

Lower 2:45 PM took shots S & E from sta. 2 like those of Sept 9, 1953 and left soon after.

Upper 5:50 PM. S. shore near sta. 24, saw 2 beavers at deadfall pond, one was { }, the other was a small one which crossed over one of the little up stream dams & whose tail was invisible. At 6 the "double-notch" approached me as I was standing near sta. 24



It came ashore & crossed point of

land & on way came to within 4 ft. of me, stopped, stood on its hind legs and sniffed every few feet before dropping to all fours and going on for a couple more feet. It hissed or "blew" frequently. Got to other side of point & slid into water, worked its way up stream a little way to some asp log lying in the water. After chewing on these briefly, it retraced its steps, giving me the same suspicious treatment before going back to the pond in which it had originally left. Only difference was that on the

J.G. Hall
1954

244

Sept 12 Sagehen Creek, 6500 ft, 3 mi. NW Hobart Mills, Nevada Co. Calif.
Upper

return trip it got to within 3 feet of me + I wasn't sure whether it was going to "charge" or not. At 7:20 I crossed over to the S side via an upstream dam, the one on which I'd killed both this season's trapping casualty beavers, and climbed a tree. I'd barely got settled before old double-notch clambered up over this dam + ~~blew~~ "blew" when she got my scent on the dam. She evidently remembered my scent from the marking + tagging experience. She swam around in this pond, dove, surfaced, went back over same crossing + splashed then chewed on an alder briefly before coming back up over the same dam where my scent was. She went to the north crossing, chewed at a stick in the dam, then went down over this dam to the next lower dam at 6:30, then on down to dead-fall dam where I'd first seen her + the small beaver upon my arrival. 6:40 - doe and spotless fawn seen working slowly up N shore from region of Jim's obs. 6:45 got down + went over to climb up to my "regular" seat obs. tree. 6:50 med-sized beaver whose tail was marked

J.G. Hall
1954

245

Sept 12 Sagehen Creek 6500ft, 3 mi. NW Hobart Mills, Nevada Co., Calif.

Upper

() came down into pond underwater but then I lost sight of it. 6:55 a small beaver with no tail notches seen in main pond, dove + was lost. 7:10 unidentified beaver cutting willow in "scarbark" pond. 7:20 spike, doe, fawns on N. shore. 7:30 twin notch (2 think) came up over main dam into main pond, swam back + forth, splashed, finally went over one of the middle crossings to cut willows. I climbed down at 7:30 and went over to ^{ward} the N shore. As I stood on the log reaching from my old tree to the shore, twin scar () came back over the main dam with a willow in her mouth and spied me. She swam and splashed about excitedly very close to me, splashing me once, then dove into the lodge with willows in tow. 7:45 I made my way over to the lodge to see if I could hear her chewing. Put my head down close to lodge but could hear no chewing so prepared to leave. Just then she surfaced in the little canal that beavers have cut to make an island of their lodge. I was on a log that crosses this little canal. The beaver began to hiss & splash excitedly and didn't

J.G. Hall
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Sept 12 Sagehen Creek, 6500ft, 3 mi. NW Hobart Mills, Nevada Co., Calif.

Upper really seem to be afraid of me. Cited more indignant. She came to within 2' of me and remained there just floating a couple of times. I left her floating in front of the lodge and returned to camp.

Oct 14 All aspen have turned; some have lost main camp most of their leaves. Willow leaves yellow & falling. Lots of chickarees around, much more obvious or abundant than in summer. Chipmunks quite common. Whipper at nest on side of the underwater tank. Weather clear & cool.

Oct 15 ~~Hot~~ down to 24° by 6 this a.m. Ar. Rockslide
Rockslide
4:10. Lodge at main dam appears disheveled & unkempt. No new logs added to it, a hole is in the top. No stored food here or at the lodge by my main obs tree. However, the wet ground in vicinity of this lodge, indicates it is still actively used. No new work on this lodge either. Tallied new willow use on the samples laid out in June & July. (entered on next page). 12:50 took color shot #34 of weir below sample C at 210 exposure. 12:55 took shot #35 of "reaction" of willow stems to beaver cutting at 111 exp. ^{an} Uncut stem is also in this picture & does not show the green area although

R'slide it is of the same diameter. After photo-
cut end

graphing, I cut
this stem off
my knife, mark-
ing it with red
paint for later identification.

Sample

	A	B	C	D	E	F	G	H	I	J
A	IN	HT HT I	O	HT	O	O	O	O	HT HT HT	O
B	O	O	O	O		O	O	O	HT I	O
C	O	O	O	HT IIII		HI	O	O	O	O
D	O	O	O	HT HT HT I		O	O	O	O	I
E	O	O	HT HT HT II	I		O	O	O	HT III	
F	O	O	73	77		O	O	O		
G	O	O		(32)		O	O	O		
H	O	O		O		HT HT HT II	O	O		
I	O	O		I		O	O	O		
J	HT	HT HT II		HT I		HT III	O	III		
K		HT HT HT HT HT HT HT HT I HT HT HT HT III		HT HT HT HT HT HT IIII		O	O	I		
L						O	III			
M		III					O			
N		HT HT HT HT HT HT II					O			
O	4	57	(13)							
P		HT HT III								
Q		46								
R		III								

Left at 5:30. Weather clear in AM, clouding over in afternoon but mostly clear by time I left.

Left at 5:30. Weather clear in AM, clouding over in mid-afternoon but mostly clear by time I left.

newly cut twigs in each clump

J.G. Hall
1954

Oct 16 Sagehen Creek, 6500ft, 3 mi. NW Hobart Mills, Nevada Co., Calif.
Upper 9:20 AM. Windy, partly cloudy, warm.
Leaves off most aspen & some willows
Went thru willow samples as yesterday
at R's slide.

12:10 PM.

Took shot #36
at 210 exp. of
food pile. 12:15
shot #37 of
asp. leaves
floating on
water 210.
Lodge has
been built
up higher
than it was
at last visit
& is well
plastered. Left 3 PM

No. newly-cut twigs in clump

	Sample						
	A	(B)	C	D	E	F	G
A	60		66	96	3	31	0
B	20		61	2	3	11	0
C	0		37	6	1	4	6
D	0		65	2	0		
E	0		11	6	0		
F	0		38		1		
G	0		20		1		
H	0				6		

Cutting schedule for asp:

D	X	L
1		
2		
3		
4		
5		
6		
7		
10		

Nov 4 Ar. 9:45 AM. Many deer tracks & some
Lower cow tracks on path down from Roadside
colony. Scared a couple of Herefords
at Shack colony, on S side. Ponds have
a v. thin layer of ice on them. Weather
is clear, calm and cold at first.

J.G. Hall
1954

249

Nov 4 Sagehen Creek, 6500ft., 3mi. NW Hobart Mills, Nevada Co., Calif.

Lower For Samples of willow use which Bob Rupp & I put in this September, the tally of new cuttings was run:

	Sample			
	A	B	C	D
A	0	0	0	0
B	24	27	1	1
C	2	2	0	1
D	0	1	4	1
E	0	5	1	0
F	1		0	0
G	1		0*	0
H			0	5
I			2	16
J			2	
K			0	
L			0	
M			1	
N			0	
O			1	
G'	28	35	12	24
			0	

No. new cuttings per clump

10:45 Hairy woodpecker working bunch of dead l'poles. Just above the big dam of shark colony there are more beaver droppings in the shallow water than I've seen at any other spot in this stream. The winter food pile is extensive and I judge this colony to be more active than any other on the

* so small it might as well be dropped stream. The food stock-pile is about 30x10' in surface dimensions. The lodge is now very large, about as large as the big one in the main pond of the "old" section of the lower colony.

J.G. Hall
1954

250

Nov 4 Sagehen Creek, 6500ft., 3 mi. NW Hobart Mills, Nevada Co., Calif.

Lower The entire E side of the lodge is heavily plastered & work looks recent. Estimated dimensions: $18 \times 13 \times 5$.

Nov. 5 Ar. 10 AM. Clear, calm. Saw crosshills on way down. 11 AM. Took 3x4 shot of shark colony lodge at 311 exp, and shot of food store or stockpile at 28 exp.

Main lodge of the old section seems to be in good shape but lacks evidence of fresh work seen in shark colony. Beaver must have left the lodge just as I approached. Heard loud bubbling or rumbling as I looked at lodge 12:15. Aspen marking schedule:

New SECTION					Old Section				
SOUTH			NORTH		SOUTH			NORTH	
No.	X		L	No.	X		L	No.	X
1				1				1	
2				2				2	
3				3				3	
4				4				4	
5				5				5	
6				6				6	
7				7				7	
8				8				8	
9				9				9	
10				10				10	
11				11				11	
12				12				12	

Below main dam { D | 1 | 2 | 3 | 4 | 7
N plus S shores { X | 1 | || | 1 | || |
Saw golden-crowned kinglets

J. G. Hall
1954

Nov 5

Sagehen Creek, 6500 ft., 3 mi. NW Hobart Mills, Nevada Co., California



"Shack" colony lodge from South. Heavily plastered.
11 AM, too sec. 8/11.

J.G. Hall
1954

Nov 5 Sagehen Creek, 6500ft, 3 mi. NW Hubart Mills, Nevada Co., Calif.



TOP

Part of stock-pile of aspen logs in Pond at
"Shack" colony. 11 AM. 50 sec. 6/8

J.G. Hall
1954

Nov 6
Upper

Sagehen Creek, 6500 ft., 3 mi. NW Hobart Mills, Nevada Co., Calif.

Ar. 9:55 AM. calm, cold & clear. Food cache just below house about 1/2 way to dam, is in excellent shape, consisting entirely of aspen logs and considerably larger than it was last month. Lodge in good enough shape but has no fresh mud on it. 11:20 took 3x4 of food pile from lodge 216 exp.

Marking schedule:

D	X	L
1		
2		
3		
4		
5		
6		
7		
8		
9		

J. G. Hall
1954

Nov 6 Sagehen Creek, 6500ft, 3mi. NW Hobart Mills, Nevada Co., California
Upper



Food store in main pond from lodge looking E to
main dam 11:20 AM 50 sec., f/16.

J.G. Hall
1954

251-B

Nov 6 Sagehen Creek, 6500ft, 3 mi. NW Hobart Mills, Nevada Co., California



Dam on pond 16, destroyed on by Dick Gard, rebuilt
by him on , then added to by beaver.

J.G. Hall
1954

17 Dec. Sagehen Creek, 6500ft., 3mi. NW Hobart Mills, Nevada Co., Calif.

Main Camp Dick Gard drove us in from Hobart Mills in his jeep about 4:30. There's 2-3 feet of snow on the ground. Weather clear & quite cold, getting below 0° every night. Dick Gard & Ray Allen have been hold-

18 Dec ing down the fort. // Up by 8 AM for breakfast at which time the window thermometer read -4°F. Didn't get started for U. colony until 10 AM. Snow on way up was soft & we both tried the climbers on our skis & they work fine. Snowshoe, chickaree, weasel & mink (?) tracks (dragging tail) also coyote tracks. Birds seen on way ^{Jimmy heard} Kinglet, chickadees, r.b. nuthatch. At 11:05 as Bob & I had entered timber just upstream from the hills meadow we saw & heard 6 hawks flying high, S or SE & about over camp or between camp & highway 89. Arr. U. colony 11:35. At Jim's Obs tree there was urine, & scat of coyote. Scat contained vegetable fibers for most part. Coyote tracks all over & around the pond. Evidence of a little cutting activity near lodge & some

Upper

J.G. Hall
1954

253

Dec 18 Sagehen Creek, 6500 ft., 3 mi. NW Hobart Mills, Nevada Co., Calif.

Upper short little tunnels in snow right next to lodge. No melt hole in top of lodge. Marking schedule:

P	X
1	1
2	II
3	II
6	I

3 — these 2 trees were not marked as I ran out of paint so will have to be subtracted from next Felix's tally. Left at 1:30

and ar. main camp 2:45.

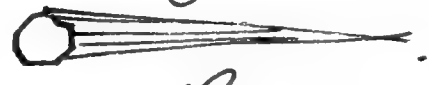
Dec 19 Got to 4° below again last night. At 9:05 I followed road out to 89, then kept down it to the stream crossing which I reached at 10:05. Heard crossbills and a downy & saw chickadees. Also heard r. b. nuthatches. Lots of coyote tracks coming down to cross stream at the "bend" just below Road-side colony. Followed snowshoe tracks of some of the air corps survivor group all the way down to the upper end of the new section which I reached by 10:30.

Lower.

All in all very little cutting & what there was was restricted to the new section. Lots of chickaree cuttings in evidence in places along the south shore. Examined both main lodge & new, "shack colony" lodge. Latter had a nice melt hole about 1 foot in diam. & 1 foot deep, down to the

J.G. Hall
1954

Dec 19 Sagehen Creek, 6500 ft, 3 mi. NW Hobart Mills, Nevada Co., California

Lower Top of the lodge itself, thru which I could hear some faint calls. When I climbed up on top of the house to put my ear next to the opening I made so much noise that 2 must have scared them. Found an AF tent made of parachute silk pitched near south shore near point N (by guess). It was apparently abandoned as there was no equipment nearby. It was 7-paneled, cone-like: .

At 11:35 took a stereo pair of the main lodge at 211. Marking schedule:

NEW SOUTH			NEW NORTH		
D	X	L	D	X	L
1			1		
2			2		
3					
4			4		
6			6		
7			7		

No cuttings at all in "old" sections. One 7" tree will have

to be painted on next trip because it was too heavily coated in ice to paint this time tho' it is entered in tally.

R'side I started back at 12:50. Ar. Rockslide colony 2:30 PM. Broke snowshoe strap so had to flounder around as well as possible but wasn't able to see all 2 wanted. Neither main lodge nor one by ice pine had melt hole in top. No evidence of any asp cutting.

J.G. Hall
1954

255

Dec 19 Sagehen Creek, 6500ft, 3 mi. W/Hobart Mills, Nevada Co., Calif.
Rockslide 2:45 took stereo pair of the snow -
covered boulders & part of colony behind
at 211. 2:55 took two shots of ice &
snow crystals near ice pine. Re-
turned to camp by 3:35. A few cir-
rus clouds starting to form in west,
otherwise weather fine & clear all day.

Hall, J. G.

1954

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J.G. Hall
1954

71.

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Beaver

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Feb. 17 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., California.

Left Berkeley with Gard & Hoffmann 2:30 PM, arriving in Truckee 8:30 or so, visited Marge & Le Roth at Hospital, then drove out to Sagehen road, parked the jeep and started hiking in at 10:25. Snow was firm enough to walk on without skis or snowshoes. Snow about a foot deep in most places, many spots bare. Arr. camp 11:10 \pm Temp 11° F. Ray Allen Sr. & Jr. in cabin.

Feb. 18 Temp 12° this morning. Left camp 9:30 to hike out to jeep, which I drove in to Hobart, hiked back to bridge where I turned off for the Lower Colonies. Arr. 12:10. My Dec 19 snowshoe tracks still visible as raised prints. The paint went thick so had to mark stumps in pencil. Marking schedule:

NORTH					SOUTH		
New			OLD		NEW		
D	X	L	D	X	D	X	No old section cutting
1			1		1		
2			2		2		
3			3		3		
4					4		
5							
6							
7							
8							
11							

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 note top
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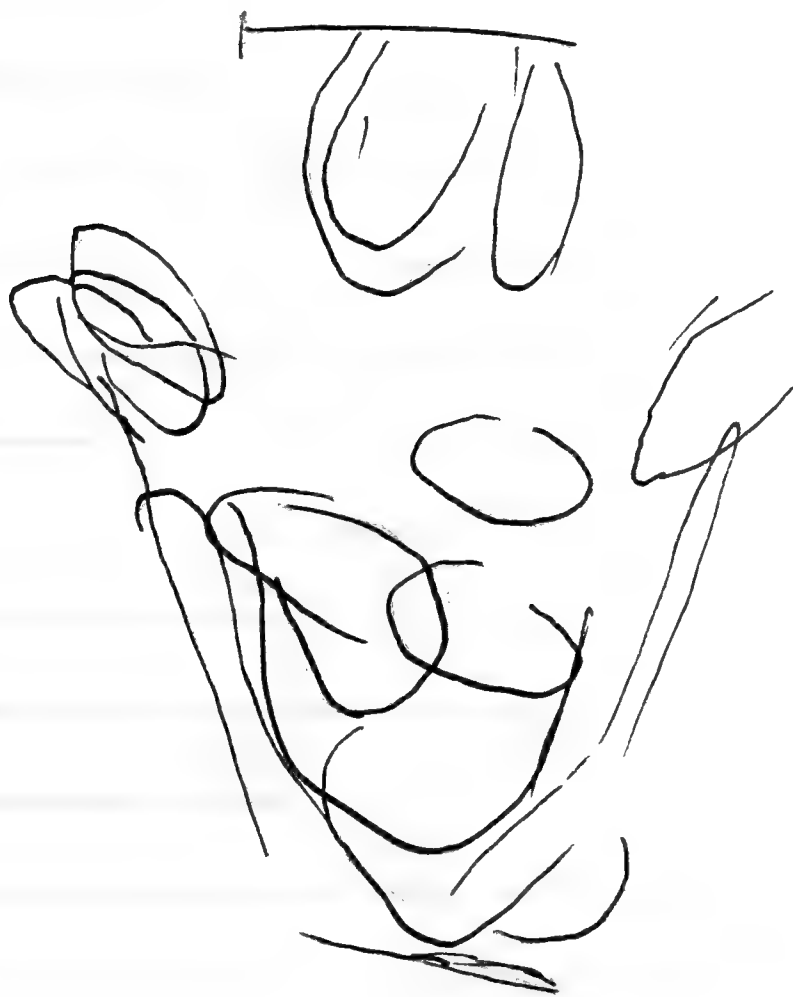
Still no netting on top of main lodge. Many coyote tracks.

Hall
1955

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Feb 18 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

Lower At "bend" area noticed several tracks coming down the hill & heading toward the creek. Not coyote (which ^{- tracks} were seen crossing this track). The animal was larger, falling thru the snow in several spots. Tracks seemed longer than coyote tracks & were "in twos" in places, like mustelid. Sloppiness indicated by occasional drag mark of toes
Sketch: (original is in pencil in field pad)
Possibility of molverine or fisher passed thru my head.



Hall
1955

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Feb. 19 Sage Hen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

Left camp 9:35 this am. after a very cold night (-8°). On way up to Upper colony saw lots of coyote tracks, some made last night. Also tracks of: chipmunk, chickaree, weasel, snowshoe, cottontails. Coyote tracks measured as long as $3\frac{1}{2}$ " in some instances.

Upper Arr. upper colony 10:40. Pond was just criss-crossed w/ coyote tracks. I've noticed this previous winters. Found a coyote scat w/ fawn remains. Good many aspen cut, mostly near lodge. Marking schedule (used pencil):

D	X
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	

} resulted
from averaging
Feb 19 & Apr 15
tallies

After marking stumps I left at 11:30 for Hoffmann's shack for lunch. Saw chickaree

11:25, Solitaire 12:15.

Left camp about 9:45 on a good crust. At Rock-slide I left Bob + Hilt

arranging to meet Bob at Sage

Hen Road. No evidence of recent asp. cut-ting. Lodge by deadfall had a small well-hole but the "obs" lodge which seems most active during the summers didn't. However, they must be active in this area as there were a number of chutes leading from one pond level to another in the immediate vicinity. Met

Feb 20
R'slide

Hall
1955

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Feb 20 Sagette Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.
Roadside Hoffmann + we walked down to "Bend" area
of roadside extension, actually below this
extension + between lower end of its
upper end of Lower colony, to re-ex-
amine the tracks noted two days ago.
They've ^{been} blown since then and are not near-
ly as clear. We followed them from
high up on the hill (where the animal
had broken thru in several places)
down to + across the level stretch
where I'd first noticed them, to
the stream which he'd crossed on
the ice. Bob took photos of the
tracks and I made another sketch:



Drag marks
of toe no
longer
visible.
We felt
that wolv-
erine was
the most
likely sus-
pect.

Hall
1955

260

Feb 20 Sage Hen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

Roadside

Dotted lines show trip route. x's mark where he fell thru crust.



We left after taking photos and crossed stream to get view and photo of the melt hole on the S side of the occupied Roadside lodge. The lodge just upstream had no melt (the same situation as last winter) so presume it is again unoccupied. Met Dick Gard at highway + started home about noon.



Occupied Lodge at Roadside Colony
11:30 AM. (Photo by Rob't. Hoffmann)

Hall
1955

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Mar 5 Gray Lodge Refuge, 5 mi. SW Gridley, Butte Co., Calif.

Left Berkeley 9:30 AM - Bob Lechleitner in his truck, arr. Gray Lodge 2 PM. Clear but v. windy. Rest of afternoon set Bob's 6 live-traps using carrots as bait.

Then made a roadside census + set out flash trap along side of one of his traps, carrot bait. Many wots, some honkers, shovellers + ruddies about. Couple of marsh hawks + a burrowing owl seen. 9 PM checked live traps + flash trap but no catches.

Moon $\frac{3}{4}$ full + wind still strong.

Mar 6 Wind calming down by mid morn.

Checked all traps about 8. One jack, marked was caught. Am. bittern + a yellowlegs seen on way to checks.

Rest of morn + till about 2:30 we hunted in several fields about a mile or so S of Hqs, getting total of 7 rabbits. On way back I tried to get an apparently sick rabbit - bow + arrow but only nicked him. Just before supper I set out flash trap in field near Bob's cottage. Sam's p. hoche around barnyard just before sunset. Avocets, v. g. swallows also around. Stopped in to talk to Johnnie Cowan

Hall
1955

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March 6 Gray Lodge Refuge, 5 mi. SW Gridley, Butte Co, Calif.
just after supper, then checked all
traps + flash. Checked flash again
at 10:30. No luck. Moon almost full.

March 7 Spent most of morning trying out
the remote-control camera set to aim
at an apple-baited field N of Bob's
cottage, since got no rabbits in the
flash trap last night. No rabbits
obliged so I got a shot of a
pipit which obliged. We left about
2:30 after taking some close-ups of
baby jacks for Bob.



Apr. 15 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co, Calif.
Left camp 9:10 for upper colony. 40°, clear + calm.
Snow 1-2' deep in patches of shade around
camp, other large areas clear of snow.
Singing: song sparrows along creek, juncos,

263

Upper nearly, Robins. Arr. U. colony 10:50
One to two feet of snow on each bank of
pond but only a very thin layer of
ice on ^{most of pond} pond itself, "open". No snow on lodge.
A 14" asp cut & lying so 90% of it is over
pond but only 3" & smaller branches
have been cut; bark from a 1' square
area removed from trunk. Big pile of
barked sticks lying at end of short
canal N of lodge. 11:55 took b+w shot
of 14" asp cut near lodge 122 exp. is open.
Marking schedule:

D	X	L
1	"	
2	"	
3	"	
4	"	
5	"	
6	"	
7	"	
8	"	
9	"	
10	"	
11	"	
12	"	
13	"	
14	"	
T	18	1

Hall
1955

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Apr. 15 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

Upper To evaluate extent of coverage of spoke samples, it would be a good idea this summer to count the no. of asp. cut beyond 100' of shore so far. Probably would amount to less than 5% of total cut. Left 1:45, arr camp 2:45. Set out camera 200 yards above camp on S side of stream. Used chicken parts as

Apr. 16 bait. done by S. Checked camera 7:30 this am. no shot - bait untouched. Arr.

Roadside Roadside 9:30 and spotted what certainly appears to be a gigantic lodge at lower ~~area~~ ^{edge} of "bend" area. The snow is melted off its North-facing slope! Big pond is around this lodge + water is high in gen'l. Won't know how I've missed this lodge before. 9:50 took B & W. of small dam + pond 322 exp, Royal P. Much cutting & a large series of dams at Bend. V. little snow on S.-facing slope; spotty up to 6" on level; up to a foot on N.-facing. Heard a Sapsucker. Arr. U.

Lower end Lower colony 10 AM. Breezy, clear + warmer than yesterday. 10:50 took a shot of dam just above shack 322 exp Royal Pan. 11:05 pair of mallards swimming on shack pond. 11:30 shot main shack pond dam at 10, f 25

Hall
1955

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Apr. 16 Sage Hen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

Lower Add 7" lodged to last fall's count plus an 11" felled to Feb. count, both N side, new section. Marking schedule

NORTH			SOUTH		
D	X	L	D	X	L
1	III		1	III	
2	III III		2	III	
3	III I		3	III I	
4	III *		4	III	
5	III I *		5	III	
6	III		6	III	
7	III I		7	III	
8	I		8	I	
9	III		9	III	
10	I		10	I	
11			11		
12			12		

No new cutting on old section

* entered a 4" & a 5" cut out in pond where I couldn't paint w/o boots.

There's a good deal of new(?) cutting in vicinity of the shack lodge, all of which is out of reach w/o boots.

Scared up the ducks twice more, song sparrow + r. c. knighlet singing also robin. Left 1:30. At camp reset camera in same spot but took it in at 10:30 as the weather has been threatening all eve.

Apr. 17 Woke up next day to find an inch of snow on ground & snow falling fast. Had terrible time getting back due to the storm which continued all day

May 21 + blocked Route 40. Left camp 9:30 weather fine. Seen on way up: o.s. f. catcher, r.c. b. lets, chipping, song & w. crowned sparrows, juncos, Steller jays, r. b. mth. mt. chickadees, And. warbler, tanager, phoebe pine, chipmunks & marmots. Ar. U. colony

Upper. 10:30. Snow gone except for patches on N-facing

Hall
1955

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May 21 Sage Hen Creek, 3 mi. NW Hobart Mills, Nevada Co, Calif.

Upper slopes of "Wyethia Knob" & by stream. Neither willow nor asp. are out yet up here. Came across 2 very fine scent mounds, the best yet seen. One, a pile of dirt, little sticks & grass was on the water's edge on the little island between the 2 obs. trees. $2\frac{1}{2}'' \times 1\frac{1}{2}'' \times 8-10''$ (height). Odor v. strong. The other one was on edge of shore right opposite the lodge. Snow is up to 1' deep in places. Cutting schedule

D	X	L
1		
2		
3		1
4		
5		
6		
7		
8		1
9		

Counted no. of trees cut more than 100' from water. Total was about 35 which is less than 4% of total cutting to date. Saw warbling vireo.

May 22 Arr. Roadside colony by 10. Fox sparrow. Arr Lower Colony 10:15 Birds seen: Pil. warbling vireo, Pewee, Song Sp., mt. bluebird, creeper, mallard, flicker. Many down logs and stumps torn open, by bears presumably hunting for grubs as was noted here about this time last spring. Some willow leaves out to $\frac{3}{4}''$, others just bursting buds. Made a visual comparison of no. of cut stumps beyond 100' from shore (mostly on S shore just opp. main

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May 22 Sage Hen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

Lower dam) and those cut within 100' of shore and am sure that over 90% are within this limit altho. a great many more trees, ^(est 200±) have been cut beyond this limit here than at Upper Colony.

Cutting schedule:

NEW				North				South			
D	X	L	>100'	D	X	L	>100'	D	X	L	>100'
1	I			1	I			1	IIII		
3	IIII			3	I			2	IIII		
4	IIII			4	I			3	IIII I		
7	I			7				4	III		
								5	I		
								6	IIII		
								12	I		

South New (add to Apr 16)

D	X	L
1	II	
2	IIII	
3	IIII I	
4	III	I
5	IIII	
6	IIII II	
7	I	
9		I
10		I

South new (add to count before
Apr 16: Left Lower colony
1:30 to arr at
new lodge at
"Bend" area colony

D	X
4	II

seen last Apr. 16. The lodge is very large + new. Looks as large as the big one at Lower colony and higher (5'est.) Wet "slicks" in 2 spots. Extensive new cutting downstream from this lodge in vicinity of where path around bend comes down to the stream + below this.

Rockslide 3 PM. Arr. Rockslide colony. Lodge at main pond looks abandoned as it has 2 holes in the roof. Lodge at D sample shows no

Hall
1955

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May 22 Sogetten Creek, 3 mi. NW Hobart Mills, Nevada Co, Calif.
R'slide new maintenance but "slides" lead to it and a scent pile is nearby. Fisherman reported seeing beaver swim into the lodge at main pond, so it must be in use still.

June 19 Left Berkeley 9 AM \pm Hoffmann, arriving here about 3:30. Helped him set out his traps

June 20 at Kiln Indw. Mosquitoes bad. // Spent most of day setting up camp for the 2 wives

R'slide + 3 children. In eve went to Rockslide to observe beaver \pm Hoffmann, Allan Sutton + Pete Brussard. Hoffmann climbed tree just below main dam, Pete + I climbed the one at Pond #4 (the old faithful) and Al climbed one right next to us. We got in place by 7:25

Noticed a new scent mound on shore on N side of channel opp. the island. 7:45 beaver came up N fork, over the crossing, into main pond, ^{during} Got hasty glimpse of tail as he crossed and it appeared to have a notch at far end: U. 8:05 reappeared and swims around in pond. The notch on the tail shows white borders (just like a newly-notched tail does). Tail also has a transverse mark: (-). This may or may not be the one + only

Hall
1955

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June 20 Sage Hen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.
R'slide beaver marked in this pond last year since that animal's tail was doubly-notched: (W) Will have to get a closer look to make sure. This animal worked a peeled stick into the little dam just above crossing, turned back up N channel, diving (into burrow at scent mound probably). 8:10 reappeared \bar{c} another stick + repeated his performance, dove, emerging \bar{c} mouth full of fir branchlets which he worked into the large dam. Then he swam up to blasted dam + dove. 8:20 reappeared swam out thru blasted dam, then back + dove into lodge. 8:25 emerged and at same time noticed another beaver, same size, no tail marks in N channel. Marked beaver comes out on ^s shore, barely, carrying mud in forepaws + walking on hind feet. This is the first time I've ever seen this. Deposits mud. Next a beaver (not sure which one) swims upstream thru gaps in blasted dam, on up out of sight (first obsn of this). Hoffmann saw this one in vicinity of the 2nd lodge (where I trapped last ♀ in 1953). Lost sight of unmarked one temporarily but at 8:30 an unmarked one seen swim-

Hall
1955

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June 20 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.
R'slide ming in N channel. Then still another one (marked?) with the first one in the channel. The marked one may have returned from upstream unnoticed but doesn't seem likely. 8:35 one seen cutting in currant bushes on shore about 20' N of scent mound. He seemed then to disappear down a hole in the ground nearby, not by coming back to water. Since he was not seen crawling from water to the currant bushes, it's probable there is an opening there that connects to the bank burrow under the scent mound. Will have to check this. We left at 8:45 & on way up to meet Bob saw a beaver swimming in the pond above the next dam (where Bob saw one). Best estimate of no. of beaver seen this eve.: 3 animals.


June 21 Left Camp about 8:30 & Hoffmann and Upper checked his Kils mdr traps on way up to Upper Colony. Noted ♂ cowbird singing in mdr. Arr. U. colony 9:35 saw Williamson's sapsucker on way in to pond. Asp & willow well out & saw a couple of fine snow plants. Noted mink tracks near

Hall
1955

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June 21 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

Upper lodge. Saw Aud: warbl. + red-breasted sapsucker. Marking schedule: none!! V. unusual. Two 2"ers should be marked on last fall's schedule. Left 10:45

June 22 Arr. on seat 6:35 PM. Weather clear but very windy as it's been all day. 6:50 spotted beaver coming down the "middle channel" above main pond. He crossed over into the N channel pond where he gets an asp branchlet, recrosses into middle channel + disappears upstream. Got two good looks at tail which was notched:  which is the "female" 2 yr-old caught + marked here Aug 8 last summer. At 6:58 another beaver, same size first seen in same part of N channel where the first one got asp. branchlet. This one got asp. bark morsel from bottom of pond + had strange habit of raising its tail, arched, out of the water while diving. Am fairly sure it was unmarked but didn't get a very clear view. It came down over dam into main pond + dives into lodge. 7:10 beaver seen in "moat" N of lodge where it stands up to bite some asp off trunk of a 10" tree felled over the

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June 22 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

Upper water. As observed previously, beaver will eat almost all the bark off of a large tree cut very near shore, otherwise, only bark up to about 3" diam. This animal, probably the same one just seen entering lodge, pulls off another piece of bark and dives. Couldn't see tail. 7:20, one swimming in deadfall pond. 7:25 one swims from main pond up to next one, sits on dam a minute or so, cuts bark, passes over into S channel. No tail marks. Climbed down from perch at 8:15 and as I was crossing over a log to the N side, had a good view of an unmarked beaver in the mid-channel where it dove & carried its tail arched out of water as the 2nd beaver of eve. had. Found two large asp, about 10 & 12" in diam felled last night near Jim's obs tree and not trimmed at all. Last night was only time they could have been felled as they certainly weren't there yesterday when I checked the

June 24 Colony. Little Ray Allen & I arrived at Lower Colony 10:45 AM. Enter a l^o to North, old sect. for last Feb^x Cutting

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June 24 Sagel Hen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

Lower Schedule:


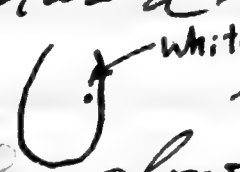
NORTH						SOUTH					
New			Old			OLD			NEW		
D	X	L	D	X	L	D	X	L	D	X	L
1	HHH HHH HHH		1	HHH HH II		1	III		1	HHH III	
2	HHH HH HH HH HH II		2	HHH HH HH I		2	HH		2	HHH	
3	HHH HH I		3	HHH I		3	II		3	II	
4	I		4	III					6		
5		I	5	I							I
			6								

Cutting on North shore has been heavy where my "A" asp sample is, roughly, & has been renewed where the "B" one is after a lapse of a year. Left 12:55. Saw Goshawk flying low over road just as I turned into main camp about 2. ^{Weather overcast + mild} Arr. 6:30 PM. & 2 beavers in sight before I climbed tree. One "crash dove" & the other dove immediately. Later the same one dove again & splash but this time the second one only "started". 7:05 one animal & unmarked (= un-notched) tail in main pond. 7:10 the ♂ came over the crossing. Could see tail was: (w) instead of (u) as I'd thought on the 21st. This, of course fits in with my record. 7:12 ♂ goes up thru gap & enters "mini channel" just other side of S dam, pulls some grass out by roots &

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June 24 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

Slide rolls it into a ball to be deposited about 1' up on shore. Reason? Have seen lots of these along shore this summer. 7:17 another beaver emerges from lodge, swims back & forth, "earing the joint" as usual, before coming out on S shore to chew on grass. Teats obvious so it must be the breeding ♀ tho' it looks a little smaller than ♂. 7:23 a third beaver comes in sight ∴ three in sight now. This one's tail has a white mark & a discolored "moon" on the tail:  One goes up main channel & I've lost tracks of all but one. 7:27 ♀ climbs up on N dam to cut willow and then another one goes up by weir to cut willow. 7:30 the one ~~by~~ ^{from} the weir reenters water & big bunch of willows, is immediately followed by ♀ & both dive at about S dam. 7:40 ♂ comes from N channel to xing & load of mud in forepaws & goes over crossing into bank burrow. 7:50 ♂ goes on down N ~~channel~~ ^{fork}. 7:55 "red-tail" beaver emerges from lodge & it too has a white spot on dorsal tail surface  but it is much nearer edge of tail, ♀ about 1/2" and is seen to be the last ♀ as it comes into a cove on S shore

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June 24 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.
R'slide to eat currant + grass + small willow shoots. It dove in immediately when I made a squeak. 8:05 saw the other beaver ^{white-}marked tail in N. channel. 8:09 one of the white-marked beaver goes up on N dam to cut more willow which it brings to lodge before entering. 8:10 ♂ comes up over xing, goes to cut willow at weir area of main channel. He seems to move about more than the other 2. Spotted a doe crossing below pond 3. 8:15 ♂ comes down from weir + lot of willows, the other two beaver fall in behind him for a ways but do not follow him as he goes over crossing + down N fork. Watched the "moon-marked" beaver for about 5 min. on land + could make

June 26 out no teats. 8:40 left. // Arr. 9:45 AM. to tally use on willow samples since Oct 15 of last year. Walked down below "lowest" dam (Gard's pond #1) to check report of Gard that there was much activity down there. There is another small dam about 60 or 70 yards down + good deal of recent willow cutting all thru this section + below. Farther down, almost to the water-intake reservoir I came

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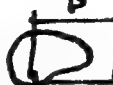

June 26 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.
 R'slide on ~~to~~ to 2 structures which I thought at first were lodges under construction. But thinks now they are remains of 2 dams ripped out & piled on shore by water Co. people from Hobart. Saw ♂ Tolmie warbler in willows.

SAMPLE

	A	B	C	D	E	F	G
A	0	0	0	7	6	0	0
B	0	0	0	4		0	5
C	0	0	0	1		1	0
D	X	X	0	70		0	0
E	0	0	2	29		0	X
F	0	0	2	22		0	0
G	0	X		12		1	1
H		X		14		1	
I		0		0		X	
J		0		0		2	
K		17		8		0	
L		3		15		X	
M		0				0	
N		12					
O		7					
P		11					
Q		4					
R		0					

No. cat in clump:

Remarks:

Sample A clump B is smaller now than Oct 15
 clump D dead  
 1954 1955


 1955

Sample B: clumps E & F much reduced & almost dead.
 Sample C: clumps A - D much reduced. Stems I cut in clump F turned brown about 1/6" below cut

and have produced new shoots below cut:



See p. 246-7. Sample D:

clump I mostly dead

Sample G: clumps C & D

much reduced. Left 12:20

Returned 2 P.M. to finish sample G. After supper I came down to watch for activity between the 2 "pseudo-lodges". Was in a tree by 7:05. Noted robin feeding large spotted yng at 7:20. Hoffmann

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June 26 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

R slide mentioned seeing yng. robins out of the nest a week ago. ♀ and warbler. Pileolated warbler but no beaver activity. Left and went up to regular post at pond #4 by 8:10. 8:17 "mid-mark" or "moon-tail" came out of lodge, "cased joint" for 15 min then the ♂ came up over the crossing, seemed to nip at or nudge or chase the other before proceeding to "mink channel" where he often goes. Another good look at "mid mark" & convinced me it has no visible teats. Then another unidentified beaver, presumably "edge-mark"; went up on N dam to cut willow, returned to water & dove. I climbed down at 8:35 + walked up to main pond where there was no activity so left at 8:45.

June 27 Arr 9:45 Noted a ♀ hairy woodpecker feeding young in nest cavity $5\frac{1}{2}'$ from surface of main pond in dead large l'pole. Yng must be well along. Finished tallying use on samples H, I, & J (see next page), then left at 11:50 to wander around upstream. Dam breeding in pond #2 is broken down, 13 still in reasonable shape tho' no new ac-

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June 27 Sagette Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

R'slide thirty is obvious.

USE

SAMPLE

No. twigs used in clump

	H	I	J
A	0	17	1
B	13	24	X
C	1	3	O
D	10	0	X
E	2	0	
F	0		
G	0		
H	0 ⁺		
I	0		
J	0 ⁺		
K	0		

+ = much reduced
in size

x = dead

No. twigs available in
clumpAVAILABLE
SAMPLE

	B	D	F	H	J
A	10	28	7	6	28
B	5	3	1	4	X
C	6	17	14	39	101
D	X	53	4	2	
E	5	33	1	13	
F	2	60	1	21	
G	X	40	9	4	
H	X ²	35	18	2	
I	1	4	X	4	
J	5	3	6	15	
K	5	22	3	2	
L	50	16	X		
M	12		3		
N	37				
O	55				
P	11				
Q	58				
R	5				

mink track on
main dam x 1

Ponds 3 + 4 have many "cave-ins" on banks where roofs of bank burrows have collapsed. One on N shore of pond

#3 has bunch of sticks used in an attempt to roof it over and this must be how many shore lodges, such as that at pond #4, were started.

June 28 10 AM. Weather overcast so far this AM. Two marmots on high rock. Took one length of shoots more than $\frac{1}{2}$ pencil width for each clump for clumps B, D, F, H & J.

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June 28 Sage Hen Creek, 3 mi. NW Hobart Mills, Nevada Co, Calif.

R'slide Shoot-length data:

SAMPLE

Clump	B	D	F	H	J
A	15	24	12	23	11
B	17	22	13	22	10
C	18	21	14	21	9
D	15	20	15	20	8
E	14	19	16	19	7
F	13	18	17	18	6
G	12	17	18	17	5
H	11	16	19	16	4
I	10	15	20	15	3
J	9	14	21	14	2
K	8	13	22	13	1
L	7	12	23	12	0
M	6	11	24	11	0
N	5	10	25	10	0
O	4	9	26	9	0
P	3	8	27	8	0
Q	2	7	28	7	0
R	1	6	29	6	0

Looked into ledge at main pond thru one of the 10" holes which are broken thru top. Inside just carpeted c willow, green + unpeded mostly. Left 12:15.

June 29 4:30 AM coyotes howling + horned owls hooting heard from our tent. This is a nightly or early morning daily occurrence lately. Coyotes sound like they are at far edge of mdr across

U. Colony stream from us. // Arr. 1:35 PM, coming on nest hole of r.b. sucker in an 8" asp. about 5' above ground. Watched both parents feed yug while I was 25' away. Yug calling loudly + must be about ready to leave. Tabulated willow use since last Oct.

Couldn't find N or M markers for sample C.

No. twigs used in clump

	A	C	D	E	F	G
A	0	6	52	1	22	0
B	0	4	5	10	0	0
C	1	11	3	40	0	
D	1	38	3			
E	8	21	0			
F	5		23			
G	7		1			
H	25		1			

Fox sparrow singing 4:35 swallow

Couldn't find clump G of sample C

These samples, unlike the 10 at R'slide, still seem to encompass all cutting.

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June 30 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

Upper 10 A.M. Came on good set of large marmot tracks in dust of road on way up. Heel usually squared off. as illustrated in sketch, sometimes more plantigrade showing more: ~~was~~ 14" about average distance between



x 1

pairs consistently, like a weasel's, so I guess it was galloping. 11 AM Took 1st 2 shots & telephoto, both of parent r.b. sapsucker at nest hole, one 25.6, one 24.5. Arr. N. colony 11:15 & made availability counts for samples C-G willow.

SAMPLE

	C		D		E		F		G	
	Avail.	X length	Avail	length	Avail	length	Avail	length	Avail	length
Camp IN TIME IT	170	42	93	25	0	—	80	14	22	24
	150	25	19	8	2	6	45	18	19	18
	120	30	21	8	15	16	48	15	3	15
	25	19	565	35	0	—				
	25	18	142	40	22	20				
	40	9			15	20				
					2	6				
					60	15				
	530	Total length	15,550	T.L.	96	T.L.	173	T.L.	44	T.L.
				28,100		1,204		2650		115

Mid-mark stake for sample C is gone but 2 yellow-paint marks on alder 4'

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June 30 Sage Hen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

Upper above the spot mark location. Creepers seen at Fork 1 PM and at mid point of sample D where one had nest under bark of dead l pole about 4' off ground. Left 4 PM, saw pr. of cowbirds 4:30 in kiln midw (N end) where Hoffmann & I noted them earlier. ♂ has a chuck as

July 1 well as a "tlee". // Arr. perch 6:40 clear, v. windy. 7:30 double notch comes down mid-channel into main pond & goes behind lodge. 7:35 goes ashore to tear off piece of bark from the 14" aspen it's been peeling regularly other evenings. Returns to shallow water as usual, to eat. 7:40 crosses down over the main or N dam xing into the 2 next lower ponds & finally into Jim's Old pond. I think tho' I lost sight of him finally. 7:50 some activity there. 7:55 I climbed down & explored upstream slowly on N side. 8:10 beaver comes down mid-channel & dives into lodge. Am sure this is not double-notch tho' I couldn't see tail. I went downstream to the big tree recently cut just below Jim's Old at 8:35 from where I could see a beaver cutting willow in the pond just below.

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July 1 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

Upper A second later when he came over to gnaw bark from the very tree on which I was standing I could see the two notches easily. Eventually ate some willow, crossed up & over the dam into Jim's old pond & was lost.

July 2 Left 8:50. Ar. 10:30 to work on willow Lower samples. Couldn't find middle stake for sample A. Fox sparrows singing & kingfishers rattling. Kingfishers also at our camp earlier this A.M.

	A sample			B sample		
	Cut	Avail	length	Cut	Avail.	length
A	0	100	25"	1	18	30"
B	8	325	28	5	14	42
C	23 missed	—	—	3	46	22
D	23	540 est	18	0	43	21
E	10	57	27	0	75	39
F	15	210	25			
G	0	157	20			

July 3 Ar 10:35 after passing Joe & his sheep to about no. of 2-300. Windy & largely overcast after last night's rain. Birds: r. b. sap-sucker, song sp., pileolated warbler. Continued c willow samples C + D, leaving about 1:30 PM. See next page for tally.

Hall
1955July 3 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

Lower

Sample C				Sample D			
	Use	Avail	length		Use	Avail	length
A	2	5	23		0	15	23
B	1	96	31		3	225	26
C	1	48	22		0	2	18
C'	1	22	38				
D	1	175	31		0	38	28
E	6	102	31		0	2	10
F	1	11	45		0	9	21
G	1	58	24		0	2	20
H	0	15	25		3	2	30
I	0	75	40		21	180	28
J	0	62	38				
K	0	10	42				
K'	0	10	25				
L	0	8	30				
M	1	28	26				
N	0	42	31				
O	2	31	29				
	0						
			25027				

July 4 Ar. 10:50 windy and many big cumulo-
Upper minus clouds. Cutting schedule:

D	X	L
2	1	
3	1	
8		1
12	1	

Cassio's finch singing. Left 11:45

R'slide Ar. 6:50 PM at lower obs. snag.

clear + cool. 6:58

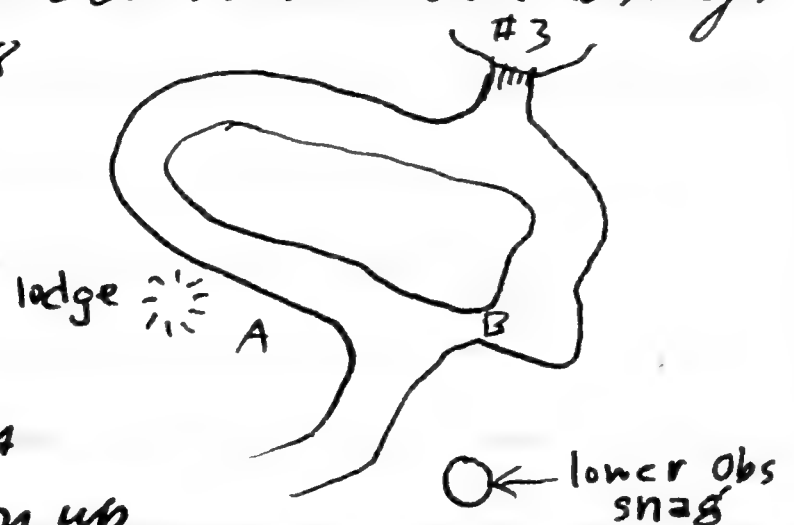
The male seen at A
cutting willows. cuts,

eats in shallows un-

til 7:20 when it swims

up to B, then goes on up

channel, over dam into pond 3 where it
dove, surfaced + food + dove to be lost
by 7:23. This behavior of the male
makes me think each animal has
more or less of a daily routine as



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July 4 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

R'slide the male is almost always seen first working up from the vicinity of A to pond 4 whereas the other two beavers usually emerge from the lodge at pond #4 first in eve. Noted a pil. warbler in willows at 7:30 + then I got down and worked downstream to where we knocked out a dam at the water inlet this afternoon.

No beavers here now and of course no attempt at rebuilding dam yet. However there is much evidence of recent willow cutting on fairly large scale. Paths, fresh tracks in mud, canals etc. They have evidently shifted much of their cutting activity down here, probably since last fall, to points well below where my lowest willow samples are. 8:05 spotted mother, yellow-haired and half-grown, black-haired porcupines coming backward down a large lodge-pole. at base the young nursed for a moment, then ♀ proceeds along the forest floor & the yng following path exactly, nose to tail. ♀ sits up on log 30 yds farther on & lets

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July 4 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

R'slide, yug nurse some more. ♀ starts to climb up another l'pole + yug begins to follow but decides against it + goes off on his own. ♀ decides to come down, using tail as a brake somewhat in woodpecker fashion, flipping it sharply away from bark when she wants to go down a "notch". 8:20 chased ♀ up tree, showed no inclination to defend the young. Yug "bristled" well. The hair on yug was actually black tipped with white. Perhaps this is usual for yug of yellow hairs. Worked my way back up to pond 4, then 8 but no more beaver in view. Left 8:35.

July 5 Main camp 8 P.M. 2 eve. grosbeaks in l'pole

July 6 by cook bldg.

R'slide Ar. 6:30 at pond 4 where a beaver was swimming calmly. Set up camera on S dam + was in posn. on N dam by 7. Weather warm + calm. 7:25 beaver came up pond + willow and dove into lodge. 7:35 one seen swimming back and forth in north channel and another suddenly emerges from lodge with food + swims downstream. 7:40 one swims up toward

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July 6 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co, Calif.

R'slide blasted dam gap & when in position I fired the camera. He barely flinched at the click & flash in marked contrast to reaction of the one I photographed this way in 1952 (see p. 74-5). He came on up thru gap, turned & swam back and was joined by another and they both dove silently as summer approached. One surfaced & then dove. Waited until 9:05 to get another shot but no beaver came. Saw 2 sizes of bats, a couple of nighthawks and 1 doe just as I left. // 11 AM. Roadside looks like some

July 8 Lower more bear work on logs. Sheep have moved in to Lower colony area to shack colony.

Cutting schedule: add a 1" to NW for May

N						S					
New			Old			Old			New		
D	X	L	D	X	L	D	X	L	D	X	L
1			1			1			1		
2			2			2			2		
3			3			3			3		
4	1		4	1		4	1		4	1	

Left
1 PM

Birds seen: fox sp., steller jay, junco, warbling vireo, song sp. Garter snake.

Upper Arr. 6:45. Birds seen on way: robin, pine siskin, pil. warbler, fox sp. Took a stand at N end of dam where I killed the

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July 8 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

Upper lact. ♀ last year. 7:10 (J) appeared in the pond, swam about reconnoitering a bit before crossing over this dam, the one below and going to N shore to cut a little willow & feed on it in shallows. Drove 7:16, emerged 7:23, went down over another dam to cut willow & then hauled it all the way up to "death" pond before diving in it. I left & climbed to my perch by 7:45. 8:15 (J) came down over deadfall dam via N channel, pulled hunks of asp bark off a large nearby tree twice to eat. At nearly same time (J) came down into main pond over middle channel and entered lodge. This is the first definite sight I've had of this beaver this season. Still appears a little smaller than double notch. Double notch entered lodge in piece of asp bark. 8:30 Double notch appeared in pond & crossed over main dam to cut willow. Then (J) emerges, begins to do same, reverses & dives back into lodge.

July 9 Left 8:35. // 10:30 PM. Betty & I saw a snowshoe rabbit on road to our camp.

July 10 Snag at 7:05, calm & warm after overcast day
R slide

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July 10 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

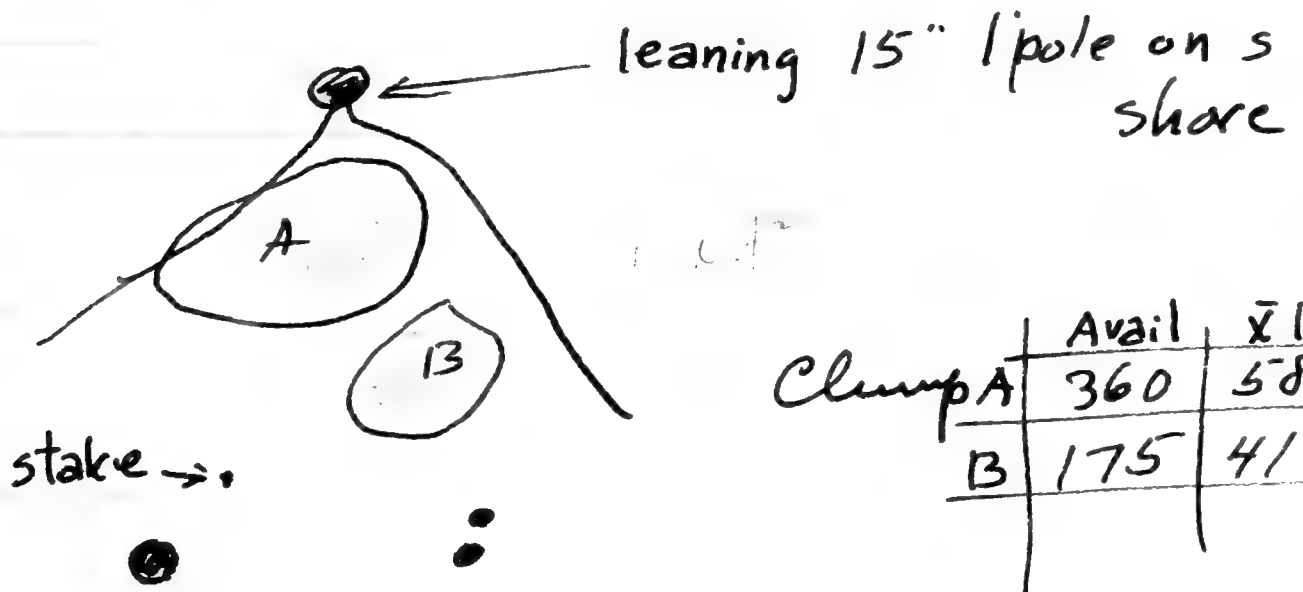
R'slide 7:23 one app. in pond 3, too far to identify, & dove repeatedly. No immediate action so at 7:50 I wandered up to pond 3 where there were two new, strong scent mounds, ~~climbed old tree~~ water v. muddy at entrance to w burrow. 7:55 one emerges from lodge & "casts" the area. 8:05 ♂ comes up N channel, over king c pile of mud. At 8:15 I climbed ~~old~~ tree after one beaver splashed, another ignored my approach. ♂ in pond & nudges ^{tail of} "Edgemark", which appears soon after. 8:17 edge mark goes over king (first time I've seen it) into N channel. Meanwhile I lost track of ♂. 8:20 saw him in the blasted dam "gap": dived near S dam, then went ashore on N dam c mud in forepaws. Cuts willow, comes back & dives with it. 8:28 "middlemark" appears, ^{no. 100} & then dives. Left 8:30 & passed pond 8 on way out - no beaver.

July 11 Arr. 10:30 c Dick Gard to run four additional willow samples: one (H) 125' upstream from D, one (G) 125' downstream from C, one (F) 125' up from B and one (E) 125' down from A.

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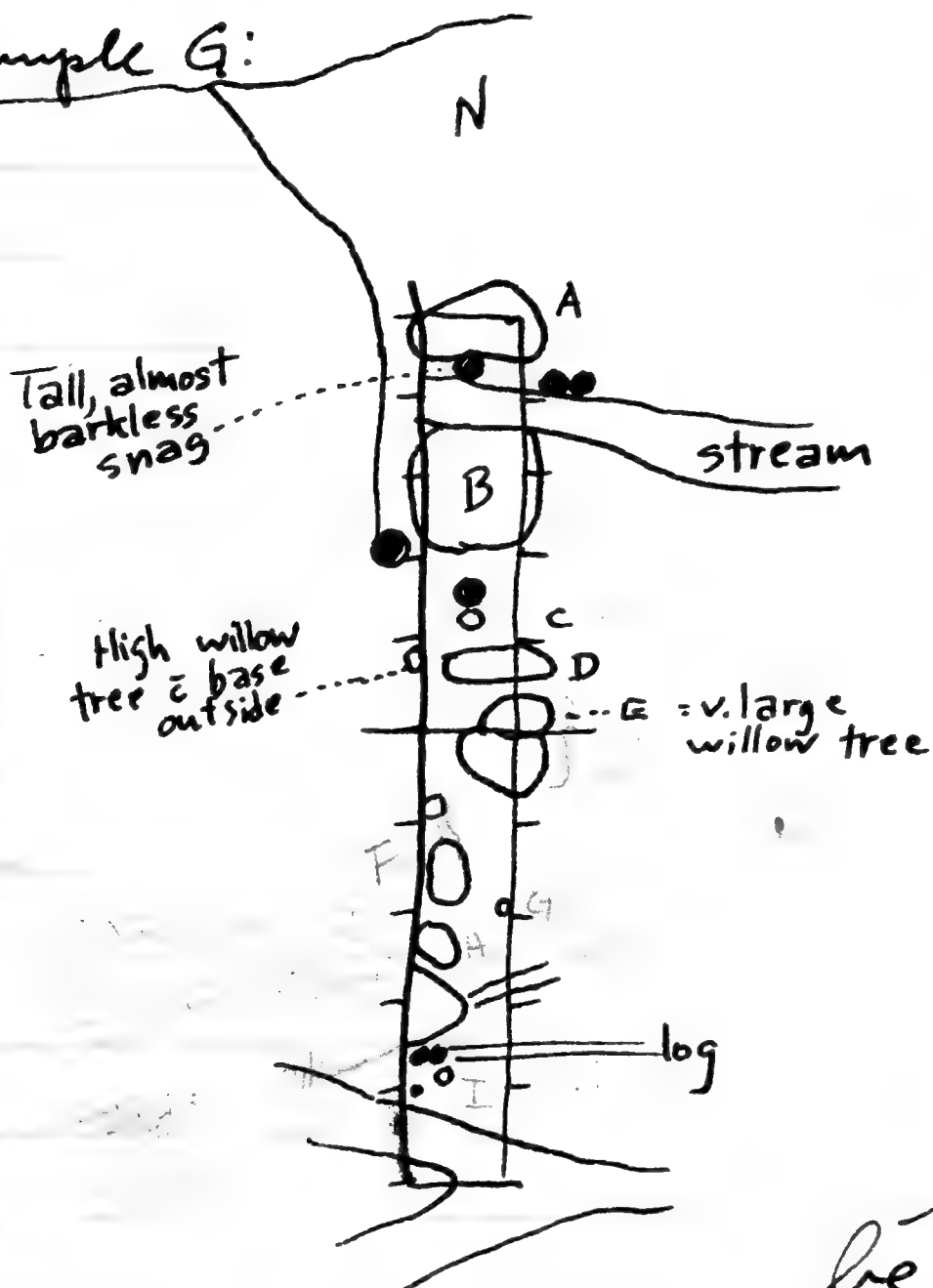
July 11 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

Lower Sample H: just placed one stake here on S shore as willow v. restricted:



	Avail	\bar{x} length
Clump A	360	58
B	175	41

Sample G:

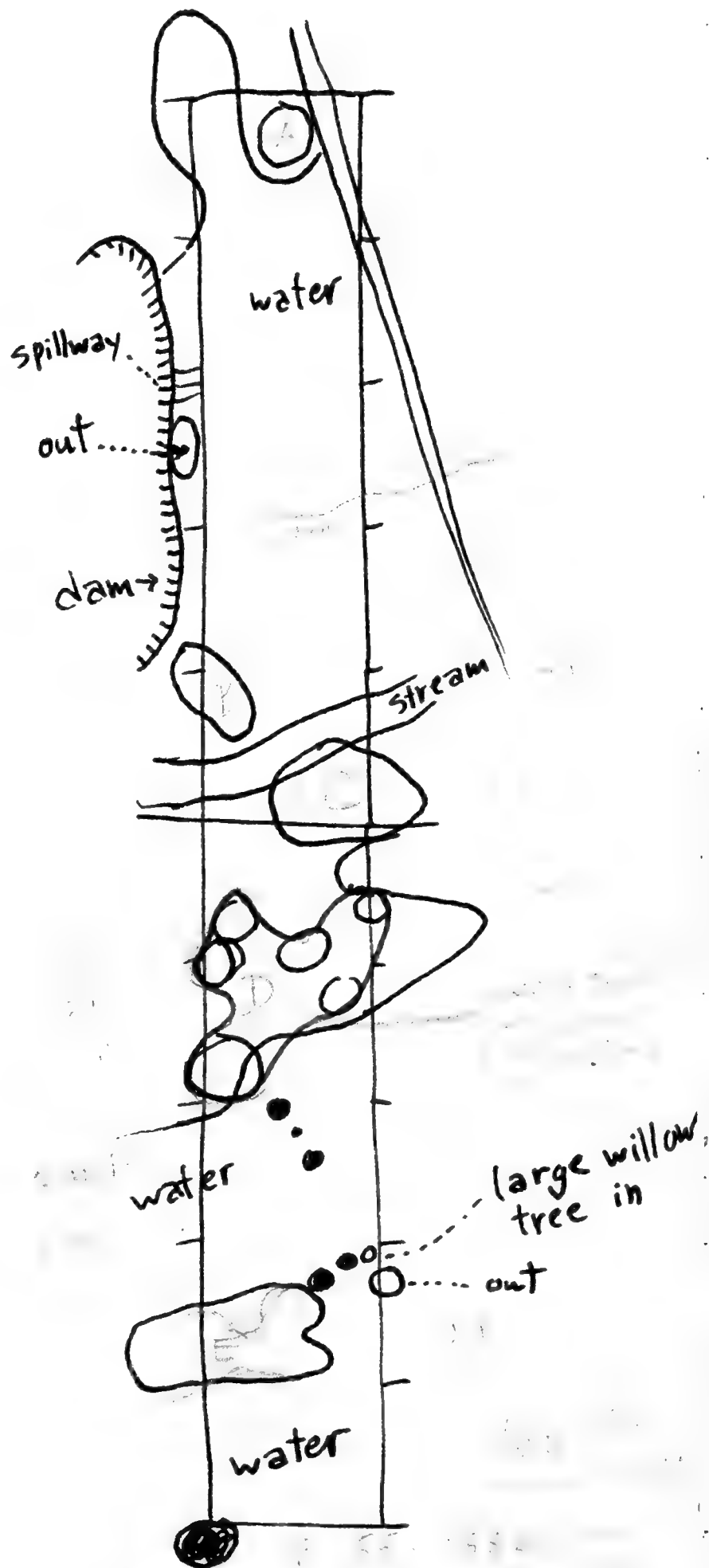
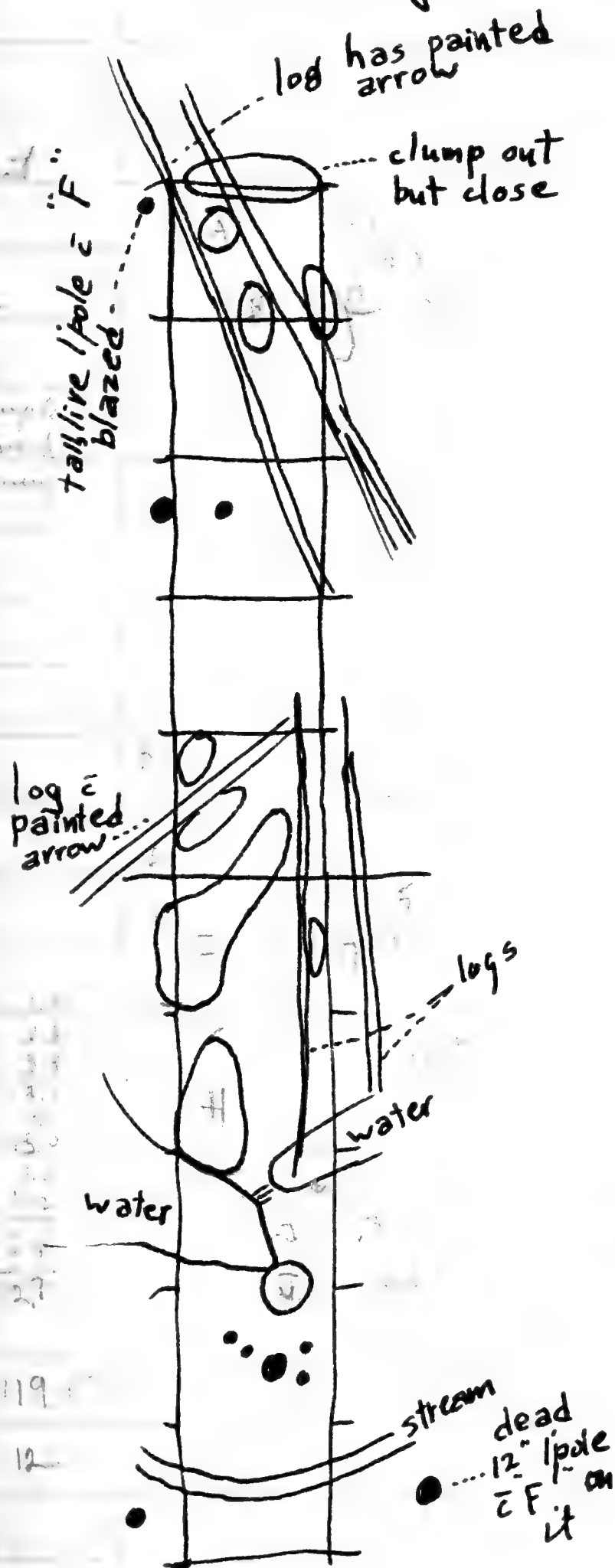


On samples E, F & G it was impossible to determine either outlines of clumps accurately or availability & length. So just used stumps were painted. The other data will have to be determined next Oct when leaves are off.

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July 11 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.
Lower F sample F Sample



Very hot; left
4:45 PM.

2' dead pole
is the "stake" + is painted
c̄ a red "E"

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July 12 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

Upper. Arr. 10:45 \pm Betty + Sally. Absolutely no cutting noticeable! Amazing. Might it have anything to do \pm killing last year's last. \varnothing ? Birds seen: warbling vireo (two birds, wing-fluttering) for sp. Left 11:25. Weather hot & clear. At Spring yng Williamsons s' suckers almost on verge of leaving nest & we checked R. B. Suprucker nest hole nr. upper colony on way down to find everyone gone. Hot day.

July 23 Cutting schedule (by Dick Gard): 10" tree

Aug 1 Donner Lake, 2 mi. W Truckee, Nevada Co., Calif.

Wend of lake, S shore on property of Frank Ravinroy. Examined beaver cuttings of fir & asp on request. Good deal of asp cut at vicinity of entrance of creek on extreme W end of lake & some large firs (up to 8" foot) on Ravinroy's property. These are bigger than any firs cut around Sagehen but only the basal bark was used as is the case \pm the smaller sizes.

Aug 1 Trestle creek on way to upper colony has Upper all dried up. Arr. 2:40; water is low at pond. Cutting schedule: none. Presence or absence of hits may have imp. bear-

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Aug 1 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

Upper ring on the low av. rate of cutting this summer. Weather has been clear, hot & breezy occasionally this afternoon. Left^{3:15}

R'slide. Arr. 6:35 PM, noted kingfisher at pond #8. Was in dog tree at pond 4 by 6:40 & saw a kit come up over the crossing & chew some willow there. At 6:45 another kit joined it from the N channel. 6:50 an adult comes up over the ring, dives into then out of lodge. Couldn't get a good look at tail. Swims around pond nervously then stops to work on a 1" fir branch in the water. Kits still fooling around. 6:55 one kit dives into lodge, other one swims to N channel. 7:10 mid-mark & kit both join "unknown" at fir to eat. Other kit seen in N channel at 7:12 and one kit swims off with one of the fir pieces. 7:15 got a better look at unknown who turns out to be "edge mark", who goes to lodge, lands, reverses and dives into lodge after a kit swims near a whines softly. That I saw ripples on "edge" when it was on land. Kits playing by N dam; mid-mark still working on fir. 7:20 saw a third kit so that means there are at least 6 animals living here. Mid

Hall
1955

Aug 1 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.
R'slide mark swims up pond. 2 kits are rolling
& wrestling near N dam; mid mark nuzzles
them and dives. 7:25 one adult goes
over xing, ^(mid mark) looked like Edge but wasn't sure.
One adult on shore cutting near lodge, 2
kits on shore nearer water. 7:30 one kit goes
over xing, then so does mid mark who'd been
cutting by lodge all this time. One kit
goes back to work on fir & the third up to
N channel & dam. 7:40, a beaver (kit 2
think) seen by eye lodge. 7:45 kit from
mink channel goes to lodge & dives. 7:50
midmark back over xing & goes to fir where
kit is, takes a stick out into pond & con-
sume it while floating! (First time this
feeding procedure seen). Kit complains
or news near mid-mark. Mid mark
swims up pond with kit alongside: 
then dives, as does kit, maintaining position &
nuzzling. 8:00 splash at dam #3 is
heeded by midmark who was about to
go ashore near S dam. 2 does & 2 fawns
then appear, working upstream. 8:18 ♂
comes swimming downstream, into
pond & dives into lodge. 8:25 he goes
down over xing & I left.

Hall
1955

Aug 2 Sage Hen Creek, 3mi. NW Hobart Mills, Nevada Co., Calif.

Lower 9:50 at "Bend" area, a probable *Zapus* Lower Colony 10:00, saw goshawk, Steller's jay, kingfisher & r.b. nuthatch. asp. marking schedule.

North						South					
New			Old			Old			New*		
D	X	L	D	X	L	D	X	L	D	X	L
1			1			1			1		
2			2			2			2		
3			3			3			3		
4		1	4	1		4	1		4		1
5	1		5			5			5		
9		1									

* one 4" tallied was out in pond & not marked.

At upper limit to new area on S side the beavers have put up a long, low dam of willows largely parallel to the stream & flooding part of the meadow.

Camp Left at noon. In late afternoon Ellert & I went up to the nest site he'd found of a goshawk SW of the Brosera bog. Found & photographed a partly feathered young which, having apparently fallen out of the nest, was sitting on the ground perhaps 60' away. Parent, excited, was wheeling & calling from occasional perches above.

Aug 3 Left for Evers' ranch - Dick & Trevor about noon in the truck loaded w/ 4 beaver traps. After unloading the traps we

Hall
1955

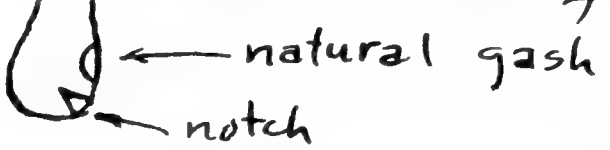
Aug 3 Sage Hen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

Lower visited the colony of newly arrived beaver a little upstream from Sage Hen's mouth. appear to have enlarged workings (all willow) somewhat. Scared a couple of snipe from willow thickets here.

Driving back we saw 3 nice bucks under shade of trees 100 yds off road: 2 points, 1 3-4 pointer. On way down to Lower col- only after supper saw an adult & heard kits at Roadside area 6:45. Alligator lizard among loose rocks at bend. Arr. Lower 6:25 As I was setting a trap at the main dam at 6:30 I heard a tree crash at "O" approximately.

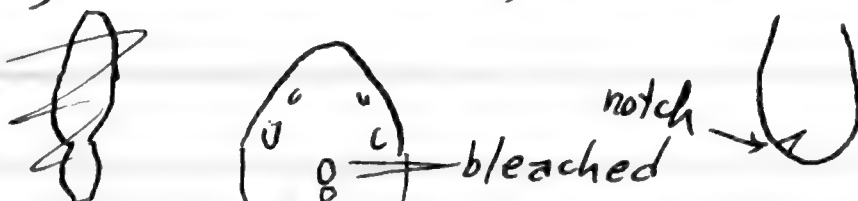
All 4 set by 7:25 and I climbed up the leaning tree next to Shack colony lodge. Warm & calm. 8:00 white-headed woodpecker working a big E pole nearby. Call seems ~ to hairy's to me. 8:05 adult surfaced in pond, swam up toward shack & dove. Then observed working on willows of my "H" sample. Couldn't see him but heard his cutting. 8:10 one (presumably the same) swims down into pond & dives. I left 8:15 to check traps. ♂ mallard flushed as I was on my way down to lower

Hall
1955


Aug 3 Sage Hen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.
Lower pond. at 8.30 found large, adult, last
♀ in lowest trap (at S end of main dam).
Another beaver was swimming around
diving & splashing as I worked on the ♀
which I notched:  ← natural gash
← notch

Aug 4 7:30 AM. checked the 3
remaining traps (I didn't reset the
above one) to find one sprung but no
beaver in any. Returned at about 8 to
camp. Back down again by 4:30 to reset
all 4 traps, changing site of two.
6:15 climbed up leaning tree at
Shack colony. Kingfishers and chickarees.
7:20 beaver surfaced in center of pond,
floated, cut a little willow, to dive &
a splash at 7:25. 7:45 2 does. 7:55
a beaver surfaced near main dam.
Tail unmarked. I left at 8; beaver
still in sight. checked all traps







Aug 5 again before leaving. // checked
trap 8:15 AM to find large ♂ in trap
set just below dam immediately opp the
shack itself. Fold of skin pulled loose
below left eye. Bleached him in 2
spots, notched tail & released.

 ← notch
← bleached
Let ~~the~~ beaver
set for 15 min.

Hall
1955

Aug 6 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co, Calif.
 R'slide Mapped in some new stakes at pond 8 = Wick
 Lower. Gard. Arr. Lower colony 4:45 to reset traps.
 5 PM at sta "N" on S side I scared up 2
 young grouse, + 2 adults (two families?)
 one of which had an incomplete gray
 band on the tail  which flew up
 to a l'pole and clucked repeatedly. Set 2 traps
 above shack colony, 2 near main colony.
 One beaver swimming near lodge of
 shack colony as I climbed the obs tree
 6:25. He disappeared. Breezy + slightly
 overcast. 7:13 mink seen at base of
 a large pine 20' upstream from lodge.
 7:40 what looked like a small beaver
 went down over dam below main dam.
 Couldn't get glasses on it in time to tell about
 details. 7:50 beaver cutting willow from
 under cover of large fallen log near lodge.
 No good view. Left to check lower traps
 8 PM. 8:10 lowest trap sprung but one half
 held open far enough by a branch
 for the beaver to escape. Beaver
 swimming in main pond as I approached.
 Aug 7. 7:45 AM. checked traps + caught 2 med.
 size beaver in the lower 2 traps
 (one at main dam, the other at

Hall
1955

Aug 7 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.
Lower sta #30), upper two not sprung. Est. these
two animals as yearlings; perhaps 2
yr. olds. No. 30 beaver:   ♀
Main dam beaver ↓   Left 9 AM.
♀?   bleach

Aug 8 4:05 PM ♀ hunting at roadside on way down, ♂
at bend. Beavers have extended work-
ing to clear around bend now +
with the exception of a very small gap,
are now in evidence from crossing
of Highway 89 to the main dam of
the "old" lower colony, about a mile
downstream! This was done sometime
in July probably. Set trap, after sup-
per + then climbed an old tree at
main pond by 6:25. 6:35 beaver
emerges from lodge, cuts willow +
reenters lodge in a branch; tail not visible.
6:45 beaver seen swimming up from above
willow sample + had unmarked tail.
6:55 muskrat nr. lodge. 7:00 bit leaves
lodge, swims up where plain-tail went. 7:03
another sight of muskrat. This is the
first I've seen of them on Sagehen. 7:20
another bit or possibly yearling
leaves lodge, floats on other side of

Hall
1955

Aug 8 Sage Hen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

Lower lodge so I can't see his tail. 7:25 The last ♀ first caught night of 3rd seen swimming around SW of lodge; marks show OK. At 7:30 she goes ashore to cut willow - which she dives into lodge, from which meowing is then heard. 7:53 fair size, unmarked beaver comes down SW channel, cuts a willow & dove 30' from lodge. This may be the same one seen earlier going up. 7:53 large beaver, tail not visible, leaves lodge via N exit & swims ^{out} to deep water of main pond. Left 8 PM & checked all traps. Porkey seen by pond on way home at sta. 17.

Aug 9 6:00 AM at Bend: 1 adult in full band (There must be two families then) plus 3 young grouse. 6:05 yearling in uppermost trap set just below sta. M17. Trap's side arms had fallen loose due to broken bolt on bottom of trap so that trap lay on its side. Could easily have drowned him but luckily he had just enough space to breathe. Marked tail. () & released. Two middle traps not sprung; lowest one sprung but no inmate. Left 6:25. Temp got down to 28 by 6 this AM so guess I'll quit trapping.

Hall
1955

Aug 9 Sage Hen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

Upper 6:20 AM. Asp marking schedule:

D	X
1	1
2	1
3	1

6:40 beaver movement but couldn't see

any beaver. 6:55 (J) floating in a S channel just below deadfall dam. I arr. seat 7 PM.

Questionable fleeting glimpse of beaver head in flash tree pond. 7:22 (J) went over dam + into lodge under water, then out + to S end of pond where I eventually lost him. 7:40 beaver whose tail was not visible is working in mid channel pond for 5-10 min. then he goes upstream + is lost. 8:05 a large beaver comes down over deadfall dam via N channel, into main pond, climbed out on a felled asp near N shore + peels bark off same. Tail unmarked!

Until now I'd considered pop. here to consist of two beaver, both of which I'd marked last year! This means pop is 3. Left 8:10. 8:30 Hornedowl heard from about vicinity of Kilm Meadow.

Coyotes heard 10 PM. Cold night.

Aug 10 2-5 PM - sketch - mapped in details. Arr

R'slide obs tree 6:50, warm + clear ♂ up over xing, then dove into lodge. Mid spot swim down pond from N channel. Both beavers went ashore, ♂ cut willow, mid mark went back to

Hall
1955

Aug 10 Sage Hen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.
 R'slide pond & disap over xing. Then ♂ went to the
 lodge & his willow cutting. 7 PM bit
 up over xing. A large beaver, probably
 the ♂ swims up main channel thru
 blasted dam, returning 7:05 & huge
 bunch of willow cutting which he
 took into lodge. 7:15 Edge mark leaves
 lodge, swims down, then up pond to
 dive into island den. 7:25 another bit
 up over xing & into lodge. 7:27 ♀ W. tan-
 ager calling in dead l'pole nr. mine
 channel. Yellow below, dull y. head &
 olive above & 2 prominent wing bars.
 7:33 bit emerges from lodge, swims ^{to N dam} up,
 & back, goes ashore at N dam to cut willow
 which it brings back to lodge. 7:35
 another bit appears from near N dam
 & dives into lodge. Then edge comes out,
 sees a fisherman, who's working up-
 stream on N shore, & splashes repeatedly.
 bit noted swimming at blasted dam. Edge
 floats till fisherman makes way
 upstream past this pond, then dives
 at 7:45 as he leaves. 7:50 midmark
 appears in pond but dives. 7:50 Aud.
 Warbler in l'pole. 7:54 mid appears in
 pond, adds a stick to the crossing

Hall
1955

Aug 10 Sage Hen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

R'slide then dives to the bottom, stirring up clouds of silt, surfaces & fir branch on which it chews in the shallows. 7:55 doe on N shore. Mid finishes meal, swims slowly up to bridge cove where it dives. Large one in N channel; think it's edge. Swims up main channel a bit, then back down to dive in lodge. Kit hurried down over xing at 8:05 as I was leaving.

Aug 12 Arr. tree on point opp "Fish" tree 6:25. warm & clear. 6:40 beaver floating in pond 3. 6:55 kit leaves "eye" lodge, works down a way to the junction & feeds ~~at a point~~ a little below this. 7:04 an adult swimming in pond 3 almost crosses down over the main dam, goes back to cross near the N end of "C" willow sample. Then dives into bank burrow, reappears & cuts willow from the sample. 7:10 another kit in pond 3; 1st one still just below junction. Adult takes a willow cutting back up to pond 3, being temporarily joined by the kit. Lost sight of both but kit soon reappears, comes on down to cut willow at spot on sample where adult just left. 7:17 kit #1 still working at jet. 7:20 I climbed down

49

Hall
1955

Aug 12 Sage Hen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

R'slide and took a stroll to area below dam #1. There are very recent signs of much willow cutting here, probably much of it being used to build & rebuild the dam across the water intake for Hobart Mills & which they've been having trouble this year. These cuttings below my lowest willow sample are going to complicate interpretations of my willow program considerably. Believe bulk of these cuttings were made since I put in my lowest (A) willow sample which was then (early summer a year ago) at or below lowest limit of cutting. 7:45-8:00 I tore out the dam ~~over~~ across water intake. Water temp 8:05 PM pond #1: 60°, Went upstream + heard meowing from pond #4 lodge at 8:15. An adult dove & splash. Arr. pond 8 by 8:25. No activity there this year as far as I can tell. Temp of water at deep end: 64.5°.

Aug 14 At noon took yellow truck down to Lower Evers Ranch + in to below the lower colony to pick up my traps. While so engaged, met a fisherman, Dave Hall, who claimed to have planted one pair

Hall
1955

Aug 14 Sage Hen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.
Lower of beaver on Sagehen just below highway 89 (where Roadside colony now is) in 1945 when he was in the Forest Service. Said a man named Snyder from Truckee was with him. Scared 2 grouse from asp. grove below main pond. One adult + one young + incomplete tail band.
Rslide Left 3:30. Arr Rslide + Wick Gard 8 PM to check temps. Saw a doe + fawn + then 3 does but no beaver. Tore out most of another dam under constr. at water intake. Left at 9.

Aug 16
Lower Bend area 10:25 AM. More dams + more flooding in this area. Very freshwork.
Marking schedule for asp

North				South			
New		Old		Old		New	
P	X	L	D X	L	D X	L	D X
1	1	1		1	11	1	
2	11	2		2	111	2	
3		3	1	3		3	111
4	1	4		4		4	

Might be good idea to lay out an experimental plot on old S shore to determine amount of sprouts estimated to be used in a year.
Kingfishers + jays noisy this AM. Left 12:30

Hall
1955

Aug 16 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

Lower 6:35 PM Arr. Shack lookout tree; heard
chewing, saw ripples but no beaver. 6:50
♀ hairy. 7:05 ad. beaver seen floating in
main pond near dam, dove to reappear
(or another beaver appeared) 7:20. It dove,
surfaced ~~and~~ ^{with} cut willow which he
took into lodge. 7:40 bit came swim-
ming up pond, circled several times,
then dove & a splash. 7:48 four
almost full grown mink worked down
along N shore. First noticed them at
shack. They swam across pond & rapid-
ly disappeared over main dam in a
strait follow the leader routine. 7:55
Beaver in notch tip tail cutting willow
in cove SE of lodge. ^{this one trapped at Sta. 30 below, trap 298} 8:08 one down in
the pond dives into lodge. Left 8:10;
coyotes calling on hill on my way back.

Aug 17 Arr about 7 PM in lower obs tree. 7:05 an adult
Upper whose tail not plainly visible, appeared in
middle of pond and passed over the dam.
About 25 min later one (presumably the
same) came back up over the dam ^{hollow} & cutting
and dove into bank den at S end of
pond. Still didn't get good look at
its tail. 10 min. later one emerged from
this den, swam over to shallows just beneath

Hall
1955

Aug. 17 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

Upper me and began to eat bark from asp
trimmings. Had good look at its tail:

U. This was probably the same beaver as the
first 2 observations. It chewed on trim-
mings for 5 min, holding stick in a corn-
cob fashion but \bar{c} first 4 fingers above &
the last or "little" finger below. It went
off to the bank den \bar{c} the trimmings.

5 min. later a beaver appeared in pond,
coming from the den & probably \bar{c} but
tail not clearly visible, hauled ashore
on south side, "primped" and then
crossed over to pond above this one.

Left about 8:15

Aug 22 Arr. obs tree at main pond 6:30 PM \bar{c} clear, ^{sun}
lower warm weather. Some activity near the

lodge as 2 approached. 6:40 a bit left
lodge via the Nest, returning to cut willow
near lodge at 6:45. 6:50 Aud. warbler in
fall dress foraging on willows at water's edge.

6:55 bit still active near lodge. 7:00 2 bits now
abroad and a large beaver is seen working
on willow over by willow at the N end of main
dam. One & then both bits cutting willow.

7:05 a very small flycatcher \bar{c} one buffy wing-
bar lands in my tree & calls "chubue".

Probably Trails. ^{a bit. swims up the channel} Then saw a isolated warbler.

Hall
1955

Aug 22 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

Lower 7:09 adult beaver, possibly same one seen earlier at N end of dam, seen by middle of dam.
7:15 kit comes from main dam & willow & takes it into lodge. 7:18 (J) appeared in pond by the lodge & went up-channel. Area to rear of right & perhaps left ear was darker or area between ears a little lighter than normal. This was the animal that was bleached in area behind & between ears (see page 296). This beaver was trapped slightly above the shack the night of Aug 4 and thus is one ^(the 2nd) instance of crossing the "boundary" between my so-called new & old sections of the Lower colony area. 7:20 heard meowing from the lodge. 7:22 (J) and a medium sized beaver, larger than a kit, appeared in the pond near the lodge, evidently coming from a bank burrow, and floated side by side for some time, the med. size one meowing. a beaver (kit?) cutting in willows near the lodge at same time. 7:27 the med. size one swam up channel. 7:30 a muskrat working in willows 30' SW of the lodge & on edge of channel.

Hall
1955

Aug 22 Sage Hen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

Lower Lots of chickarees calling. 7:32 a kit leaves lodge to swim into main pond. Rat dives. The kit perches on a floating log and feeds. Rat reappears. The kit swims out to get more water weed, which is what it must have been eating the first time, returns to eat it aboard the floating log.

7:37 another kit (at least the 3rd seen tonight) approaches lodge from N end of dam while an adult, whose tail not visible, appears from S end of the dam & large willow stick & enters lodge. Think it was not a marked animal but am not positive. 7:41 kit on log dives off, swims to lodge, floats, then swims back to main pond. Muskrat, which is a little smaller than a kit this time of year, seen swimming in the main pond; another one is ~~in the~~ near the channel. Then one (the 1st?) cuts some grass & dives & it near (into?) lodge. 7:50 one kit is just swimming back & forth out in the pond, another sits in shallow near lodge. A kit comes back to perch on log to eat some willow cuttings, the other one still squatting in shallows.

Hall
1955

Aug 22 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

Lower 8:00 Two small muskrats chasing each other by the lodge. Lgt 8 PM seeing 3 deer, 1 porcupine & 1 horned owl on way back.

Aug 23 Arr 11 AM & put out triangulation stakes from shade area upstream to Wick's "W5" tree & then back downstream to sta. V of the 1953 survey. 12:50 took color shot of shark pond exp 14 from the leaning obs tree. Left 1 PM.

R'slide Arr. 6:45 - Trevor in usual obs. tree. 6:47 bit down over xing from main pond. 7:03 ♂ up over xing into pond & dove on N side of isle. 7:10 "edge" comes into pond from N channel & floats. Another adult (♂ prob.) in a cove. 7:15 ♂ over xing to #3 pond. 7:20 mid mark floating by isle, another gnawing in sink hole by lodge. 7:31 mid then surges about pond and dives into lodge. 7:40 a₁^{2nd} hit over xing to #3. Left 8 PM.

Aug 24 Spent AM mapping - Trevor // on 25th spent
Aug 25 morning mapping, ^{Lower} All Sutton, afternoon mapping
Lower.

R'slide Rockslide from pond 8 to Wick's pond upstream.

Aug 27 All afternoon mapping in detail parts of R'slide.
R'slide & Upper 7 PM arr upper colony & climbed the very rickety deadfall obs tree for the first time. This is an excellent obs point as it commands a good view of active areas both up & downstream (more than do either of the lower obs trees) but is dangerous

Hall
1956

Aug 27 Sage Hen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

Upper to climb. Water very muddy by bank den near leaner " & " scarbank" on my arrival. 7:20 beaver appeared in deadfall pond, cut willows, went over dam & into leaner bank den. Had a good look at his tail which definitely has no mark; a medium sized animal. This means there are at least 3 beaver here. 7:30 "no-mark" left den, floated, then went ashore near scarbank & ate some grass.

then back to water, over 2 dams into main pond, over main ~~pond~~ dam 7:38. at 7:45

(I) came up from below & entered bank den, but left immediately to go up over 2 more dams as (J) came down from above & entered den. I climbed down at 7:50 as (J) went over into main pond. Left colony 8 PM.

Aug 28 Arr. 12:10 and ran asp. spoke samples A-C and also cutting tally for complete colony. □ = tree cut since Aug 28, 1954; ○ = tree died since Aug 28, '54

Asp Sample A:

Plot No:	1	2	3	4	5	9
Diam. live trees 1 yr ago	(14)	[5]	[10] [6] [6] [3]	13	[4] 2	3

(Plots not listed had no live asp on them 1 year ago)

Sample B	1	2	5	6	7
Plot No:	1	2	5	6	7
Diam. live asp 1 year ago	[5] [6] [7]	[10]	13	11 [5]	2 3

Hall
1955

Aug 28 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

Upper Asp. sample C

Plot No	5	7
Diam. live asp 1 yr ago	4	6, 5 3, 3

Marking schedule for colony as a whole:

D	X
1	HHH
2	HHH HHH 1
3	HHH
4	HHH
6	1
7	1

2 PM hole through bottom of dam just above where I killed the ♀ last year, has ^{almost} completely drained this pond. Level dropped 18". The former bottom is still wet so the damage is probably fairly recent. A bank burrow has been exposed. The same thing has happened to the second dam below "flash tree" dam and the level has been lowered about a foot. Have no idea as to what might have done this. Left 2:40.

Aug 29 Arr. 2:40 to do asp samples D-G

Sample D

Plot No	1	2	3	4	5	6	7	8	9	10
Diam asp alive one year ago	<div>4 1</div>	<div>1</div>	<div>5 4 3 2 2</div>	<div>4 3 2 2 2 2 1</div>	<div>4 3, 4 3 3 4 2, 2 2, 2 1</div>	<div>3 2 2 2 1</div>	<div>3 3 2</div>	<div>5 4 3 3 2 2 <div>1</div></div>	<div>4</div>	<div>4 3 2 2</div>

Hall
1955

Aug 29 Sage Hen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

Upper Sample E

② = dying

Plot No.	1	2	3	4	5	6	7	8	9	10
Diam of	7	3,3	4,3	11	4,4	1	3	2	5	4
Live asp	6	2,2	2,2	2	3,2		1	1	4	3
1 year ago	4,4	2	2,2	1	2,2		1	1	4	2
	4	2,2	2,1		1,1		1		4	
		2,1							2	
		10							2	

Sample F

Plot No.	1	2	3	4	6	8	9	10
Diam. Live	6	2	2	1	5	2	4	6
Asp 1 yr ago	2		2		3	2	3	6
	1		2		3	2	3	4
	1				3	2	3	
					2	1	2	
					2	1	2	

Set camera

in string set

on to twig

of a tree

worked on

last night

by beaver,

+ left 5:30

Sample G.

Plot. No.	1	2	3	5	6	7
Diameter	④ 4	4,3	2	4	3	③
of Live	4,4	3,3		4	2	
Aspen	3,3	3,3		4		
1 year	3,3	2,2		2		
ago	3,3	2,1		2		
	2,2					
	2,1					

Camera fired during night (see next page)

10:30 AM. Retrieved camera & equipment.

6 PM. Large beaver in pond next to the trail which skirts the hill. No tail marks.

Lower. 6:20 PM climbed a tree in the willow jungle and about 40 paces upstream from the burnt snag dividing my arbitrary "old" + "new" sections. Tree commanded a view of two of the north channels. 7:20 beaver ripples seen & also at 7:37 + later occasionally but no beaver actually.

Aug 30
Roadside
Aug 30

Hall
1955

Aug 29 Sage Hen Creek, 3 mi. NW Hobart Mills, Nevada Co, California
Upper



Self-portrait taken during night of Aug 29-30

Hall
1955

Aug 30 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., California

Lower. seen. Left 7:50. Heard poorwills at roadside.

Sept 1 Mapped in the morning with help of R'slide Pete Brussard.

Sept 2. 5:30 A.M. Full moon. Fairly warm for the time of day. No activity at pond 8 so went to pond 4 & was met by splashing & diving routine when I reached S dam. Beaver barely visible by the moonlight. I got into position in obs by 5:40 & the beaver soon was lost. Faint light noticeable in the East. 6:15 an adult swam underwater from the lodge to isle. Moon just set. 6:20 bit up over xing with a small willow cutting & which it dove into lodge. Simultaneously another beaver swam from S to N dam. 6:25 a beaver (probably same as the 1st one observed) swam underwater from isle to lodge. 6:30-6:35 an adult made 4 trips from N channel to small ~~old~~ dam above the crossing to deposit mud on the dam. Walked on hind legs carrying mud pressed against chest & paws. It then swam to ^{near} bridge cove to bank burrow. I left at 6:40, passing by pond 8 on my way but again it had no activity.

Hobart Rd. to Euer's Ranch 0.5 mi from Hobart, 4 P.M. Coyote in big
Mills field W of road. Lean, leanly & young-looking. Seemed mildly interested

Hall
1955

Sept 2 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.
in our irritated howls + barks when we stopped the truck. Unconcernedly made off for the timber.

R/Slide By 6:20 had camera set up aiming at dam no. 3 to try remote control of beaver crossing to or from level no. 2. 6:25 large unidentified adult appeared in pond 3 and went down over dam but at 12" tree overflow instead of main crossing. 6:27 one, presumably the same, dove by eye lodge. 6:45 adult whose tail was not visible seen in pond 3; swims around a bit, finally goes up fork. 7:00 still constant activity at eye lodge. Kit comes down pond 3, then back up & then down again to cross over same place as the adult had earlier. Took tele-
^{See p. 314 A.}photo as it did so. at 7:10. He "froze" at sound of shutter but then went on over. 7:11 kit seen coming around point to eye lodge. I think they must swim clear around this point rather than via any channel connection in the big island, as the opening of this channel is downstream from where I first see them following disappearance in upper part of level 2. 7:12 ♂ kingfisher alights on

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Sept 2 Sage Hen Creek, 3 mi. NW Hobart Mills, Nevada Co, Calif.
R'slide



Kit crossing from pond 3 to 2 7:10 PM

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Sept 2 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

R'slide tree in pond 3. 7:35 Big one, (ident from photo as ♂) comes down channel to pond 3 + over main crossing of dam into level 2. As he did so I first took a telephoto in the 35 mm then a flash shot in the set camera. He paid absolutely no attention to the flash of light or to the noise of shutters and continued serenely down stream via the N channel of large island. I left about 7:45 after setting camera on automatic for rest of

Sept 3 night. // Checked camera 10 AM - no luck. Helped Gard shock fish in pond 7 rest of morning. Took several black + whites on 620

Lower 3-4:30 PM. surveyed across V-A line in Dick. 7-8:00 watched for beaver at shack colony in Dick Gard but saw none at all. 7:45 I does sprang across stream at vicinity of shack - acted in a hurry, may have gotten scared.

Sept 4 Shack colony and in same tree as last night (about 20' SW of lodge) by 6:20. A little rain this afternoon but all is clear now. 7:05-10 Watched + tried 3 telephotos of grown mink as it worked over the large leaning log next to the lodge. ^{See p. 315 A} It explored it, the lodge and two other logs. No beaver in sight again all evening. Left 7:45.

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Sept 2 Sage Hen Creek, 3 mi. NW Hobart Mills, Nevada Co., California
R'slide



The adult ♂ crossing over from pond 3 to pond 2
via the dam #3. 7:35 PM. Remote control

Handwritten note: 10/1/55 to 10/1/55

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Sept 4 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., California

Lower



7:10 PM

Mink working near shack colony lodge (lower right hand corner)

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Sept 5 Sage Hen Creek, 3mi. NW Hobart Mills, Nevada Co., Calif.

Lower 10:15 AM Ran asp samples

Sample A [] = cut in year @ = died in year

Plot No:	1	2	3	6
Diam of trees alive 1 year ago	[3]	3 2	[2] 2	3,3 3,3 3,2 2,2 2,1

SAMPLE "B"

Plot No.	1	8	10
Diams	2	[2]	2

Sample C

Plot Nos	1	2	3	4	5	6	7	8
Diams	0	4	2	[2]	3	2	3	1

Sample D

Plots	2	3
Diams	[1], 1	1

Sample E

Plots	4	8
Diams	2 1	[2] 1

Sample F

Plots	1	7	9	10
Diams	[1] 1	3 2, 1	[1] 1, 1	3, 1 1

Sample G

Plots	1	2	3	4	6
Diams	[2, 5] 5, 4 4, [3] [3]	6, [5] 5, 5 4, [2] 1	[7] [5] 3	6 3 1	4 4 4 3

Cutting Schedule

NORTH				SOUTH			
NEW		OLD		OLD		NEW	
D	X	D	X	D	X	D	X
1	1	1	11	1	1111	1	1111
2	111	2	11	2	11	2	1111
3	1	3	1	3	1	3	1
4	11	4	111	4			
5	1	5	1	5	1		
6							
7	1						
8	1						

11 AM. 2 mallards flushed from just below shack dam. 2 PM flushed covey of quail about 15' from shack area. Left 2:05

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Sept 5 Sage Hen Creek, 3 mi. NW Hobart Mills, Nevada Co., California.

Lower Arr 6:20 PM - flash trap which was set up by 6:50 & was in obs tree at main pond. 7:00 muskrat working at E side of lodge, 1 is working near shore. 7:08 kit in main pond & goes over main dam. 7:15 2 rats chasing each other around. 7:20 2 adult beaver in main pond and both went over main dam. First over dam had tail marked: U - possibly other notches. 7:25 took telephoto of a muskrat.



Muskrat feeding near main lodge at Lower Colony

One rat went up over small dam and the other is eating grass near lodge. 7:30 frogs calling and Coopers hawk flew by me into the trees. 7:35 kit in main pond. Deer have been crashing all over the countryside this eve. 2 left about 7:45.

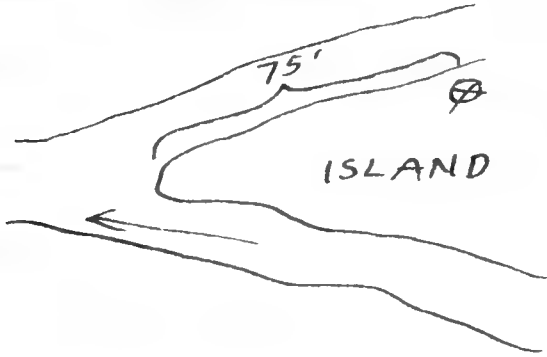
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Sept 6 Sage Hen Creek, 3 mi. NW Hobart Mills, Nevada Co, California

Upper 10 A.M. Cutting schedule:

D	X
1	11
2	111
3	1

No new mud or sticks on house. Juncos & chickadees noisy. Found another "cut & healed" beaver tree 4" in diameter



above most cuttings.

Of the two dams damaged sometime before my last visit (Aug 28) the upper

one shows no change whereas the lower one has been completely repaired so that the level has been restored. Took core borings of 7 trees as follows and estimated ages are included:

Diam	Est. age
2"	30 yrs.
2"	45 "
3"	45 "
4"	40+ "
7"	115 "
9"	105 "
12"	105 "

Bearing asp sample D
347°

Left 11:55

R'slide Ran asp samples

Sample A

Plot No.	2	3	4
Diam. of Asp living 1 year ago	1 1	1, 1, 1 1, 1, 1	1

Sprout tally for Sample A

Plot No	1	2	3	4
No. live sprouts in clump	A-4 B-1 C-10 (really 2 groups) D-5 E-2	74 in plot as a whole	A-9 B-16 C-18 D-25 E-7 F-6	A-20

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Sept 6 Sage Hen Creek, 3 mi. NW Hubart Mills, Nevada Co, California

R'slide Sample B, ^{azimuth} bearing 336°

Plot #	3
Diam live trees 1 yr ago	1

Sprout tally for sample B

Plot no.	1	2	3
live sprouts in clump	A-1 B-10	A-3 B-9 C-6 D-6	A-60± B-10 C-1 D-10

Sample C, azimuth 339°

Plot no	2	4	6	8	9	10
Diams live asp 1954	1	1,1 1,1	1	3,2 2,1	1	(3), 3 2

Sprout tally for C

Plot no.	2	3	4	5	6	7	8	9	10
live sprouts in clump	A-2	A-9 B-2 C-4 D-19	A-4 B-35 C-8 D-7 E-5	A-6 B-4 C-? D-7 E-1	A-9 B-7 C-1	A-35 B-? C-1	A-15 B-0? C-12	A-4 B-6	A-2

Sample D, azimuth 336°

Had difficulty in interpreting or locating some plots of the south half of this 200' long sample. But was able to locate exact boundaries of the plots and important fact was that there was no new cutting in past year.

D, N half

Plot No	2	4	5	6	7	8
Diams	3	3,1 1,1	3	4,2 1,1	4 3 1	1 1

Sprout tally

Plot	3	7
live sprouts in clump	A-25 B-?	A-? B-?

Lower am. 7 PM = Elbert Brock. He sat in main old tree, 2 in a new old tree 30' upstream from where 2 caught last beaver. Left 7:50 after seeing no activity. On way back we heard poorwills

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Sept 6 Sagehen Creek, 3 mi. NW Hobart Mills, Nevada Co., California

Lower calling from N shore and I succeeded in calling one up. It circled around my head once, then settled down about 50' away to call a few times. The call has a third note following the "will", audible when this close.

Sept 7 Saw a mink running along on the slope next to one of the Roadside ponds a little after 9 as I was on my way down to Lower colony. Arr 9:30 and did detail mapping till about 3, scaring up a mallard from pond just upstream from

R'slide shack at 10:30. Arr. R'slide 4 and did detail Lower mapping 4:45. // Driving out to main road 5:35 just upstream from R'slide saw a nice big marten lope across the road + disappear among rocks + trees supporting road shoulder. By far the best view, the only good view, I've had of one. Like a ^{long} furry, short-legged cat. Arr. Lower colony 6:15 PM in obs tree opposite "O" sta, about $\frac{1}{3}$ of the way across from sta. O. Had a good open view of one of the channels + a couple of dams but saw no beaver. 7:10 one mink seen swimming among grassy spots in pond. Climbed down 7:45 PM. Called up a poorwill at 8 just like last night except that there weren't any calling to begin with this time. One circled me, then settled about 50' away + called a few times.

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Oct 21 Sage Hen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

Upper Left camp c Wick Taker, meeting some deer hunters on way up. Arr. 10 AM. House plastered + a new dam present at sample "A". Willows still have most of the leaves on in contrast to the situation on Oct 15 of last year. Ran willow samples.

Chump

Sample A:	A (NO.) 2	B (SU.) 0	C	D	E	F	G	H
Sample B	0							
C	44	54	0*	7	10	19	0	
D	74	0	4	0	0			
E	0	9	8	2	2	2	0	2
F	61	18	11					
G	1	0	0					

* a great deal was available + was cut from Oct 54 to July 55

Aspen cutting schedule:

D	X	L
1	HHH HHH 1	
2	HHH HHH HHH HHH 1	
3	HHH HHH HHH	
4	HHH IIII	
5	II	
6	III	
7	I	
9		1
10	III	
12	I	
15	I	

Wick sug-
gested measuring food
pile + no. + size of
unpeeled asp. logs in
dams of this colony.

Also suggested
weighing a known
quantity of willow
for dry weight ~~on~~
calculation. Left

R'slide 4 PM and arr. Rockslide 5:10, watching
at pond 4 obs tree until 5:40 without
seeing any beaver. Broke small hole
in 5 dam no. 5 on way back.

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Oct 22 Sage Hen Creek, 3 mi. NW Hobart Mills, Nevada Co. Calif.

Lower 9:25 AM. at bend area on way to lower colony there were several new dams, one, 20" high, made entirely of unpeeled willow twigs with the leaves still on them. The dam just below this which appeared this summer has been lengthened so much that the pond behind it is now almost as wide as the valley floor. Ran willow samples

E			A		B	
Clump	Use	Available as of this spring	Clump	Use	Clump	Use
A	1	$(38 + use) \times 20"$	A	0	A	5
B	2	$78 + use \times 15"$	B	52	B	0
C	9	$530 + use \times 22"$	C	0	C	0
D series	0	$6600 + use \times 25"$	D	3	D	2
E	13	$280 + use \times 20"$	E	2	E	16
			F	8		
			G	1		

F			G		
clump	Use	Avail. in Spring	clump	Use	Avail.
A	4	$70 + use \times 35"$	A	9	$125 + U \times 32"$
B	2	$100 + U \times 35"$	B	7	$400 + U \times 40"$
C	7	$187 + U \times 24"$	C	0	$4 + U \times 18"$
D	0	$110 + U \times 30"$	D	0	$55 + U \times 21"$
E	10	$26 + U \times 27"$	E	0	$500 + U \times 23"$
F	62	$150 + U \times 26"$	F	3	$200 + U \times 25"$
G	7	$40 + U \times 30"$	G	0	$5 + U \times 15"$
H	15	$360 + U \times 38"$	H	0	$141 + U \times 20"$
I	4	25	I	0	$9 + U \times 15"$
J	11	15			

Important part of the inaccuracy of my method stems from fact it is not practical to measure diams. So 4 big stems, if cut, receive no more "credit" than 4 small ones yet may represent the material of 25 small ones. Think 3 is about right for

Hall
1955

Oct 22 Sage Hen Creek, 3 mi. NW Hobart Mills, Nevada Co, California
lower a correction factor.

"C" willow sample

Clump	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Use	0	0	0	4	0	15	0	0	0	0	0	4	0	0	0

"D"

Clump	D	E	H	I	all others
Use	4	4	3	20	0

Lots of new
work on this
dam (shack).
Left 4:40

Oct 23 9 AM. Down to 19° at 6 this AM and there
R'slide was thin ice on some of the ponds when I
arrived. Willow samples:

A					
Clump	A	Rest	D		
Use	11	0	dead		

C					
Clump	B	E	F	Rest	
Use	3	11	45	0	

B											
Clump	A	C	D	K	L	M	N	O	P	Q	Rest
Use	13	4	dead	3	8	3	17	38	7	38	0

D												
A	B	C	D	E	F	G	H	I	J	K	L	T
26	5	17	35	28	67	35	18	?	1	14	12	248

F												
H	J	Rest	A & B									
11	4	0	almost dead									

G												
B	L	Rest										
1	3	0										

H												
B	D											
1	1											

I												
A												
5												

J												
All												
0												

A tremendous amt. of cutting in willows below
pond #1. Entire clumps have been trimmed.

Estimate 180 recently cut stumps from 3x6' clump.
One new dam down here. Water very muddy
in a channel just E of obs snag, suggesting
presence of beaver tho' 6 or 7 were said
to have been trapped out in Sept. 11:05 took

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Oct 23 Sage Hen Creek, 3 mi. NW Hobart Mills, Nevada Co., Calif.

Slide shot #16 of browse line "on clumps O & N of B sample. 11:30 took shots 17 & 18 of clumps E & F to show sprouting for comparison - a shot of clump F taken last year.

Finally found N stake for sample "J" & it is 30 paces from "X". Left 4 PM to arrive at snag 4:35. Left 5:35 to check pond 4 at 5:40. No beaver seen during this time.

Oct 24 9:05 AM. Aspen cutting schedule:

Lower		North		South		Willow Sample	
NEW		L	OLD		NEW	"H" clump	
D	X		D	X		A	B
1		1	2	1	no "old" cutting	USE	30
2							2
3							
4		1	4	1			
5		11					
6							
7	1		7	1			

Birds seen: creepers, r.c. h'tet, juncos, robins, chickadees, jays, haires, flock of ⁸⁻¹⁰ pigmy nuthatches (never seen on Sagehen Creek before by me).

New dam and much new willow cutting below main dam.

Most of new asp cutting is in vicinity of shack & lot of that on my asp. sample. On asp. sample A the N stake monument is about 3' S of last clump - a blue tack and 17 paces from S stake. Left 11:30 AM.

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Oct 24 Sage Hen Creek, 3 mi. NW Hobart Mills, Nevada Co, Calif.
R'slide 1:15 PM. Made a spot check on the clump nearest to water 125, 250 & 375' below sample A (willow) to try to compensate for this lack in my willow sampling. Most if not all this cutting has occurred this season.

Dist.	twigs avail this spring	Est. use this season	Clump Diam	Ave leader length
125'	43 115 + 100	29	5'x3'	36"
250'	124	9	3'x6'	27"
375'	86 55 + 100	31	4'x4'	24"

Left 1:40

Upper Ar. H. colony 2:30 PM. Counted & est. length & diam of unpeeled asp logs appearing to be this year's work

	Diameters				
Lengths	1	2	3	4	5
	74	48	96	48	48
	72	36	48	48	72
	72	60	36	24	60
	50	48	72	12	36
	48	48	60	96	72
	15	15	36	36	72
	60	40	84	36	60
	84	36	48	84	60
	50	28	72	36	60
	36	22	84	48	72
	48	75	48	16	108
	15	60	60	96	84
	72	70	72	60	60
	24	60	48	60	120
	60	85	60	75	72
	30	60	84	70	
	50	45	72	60	
	144	48	72	84	
	72	36	48	60	
	80	36	120	36	
	120	48	30	108	
	30	24	48	60	
	36	12	48	40	
	80		48	72	
	120		84	36	
	60		120	48	
				60	

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Oct 24 Sage Hen Creek, 3 mi. NW Hubart Mills, Nevada Co, Calif.

Upper new lodge going up in Jim's Old pond = pond at willow sample C. list of unpeeled logs used:

Diam:	1	2	3	4
lengths	36 70 80 60 60 50	60 15 95 120 120	48 90 50 50	48

On the old lodge there is just one new unpeeled asp 2" diam, 72" long

Picked out as "typical" a willow clump as possible and cut 35 twigs off as nearly as possible in the ratio that they are used by beaver. Used clump A of sample D as my guide

Left 4:45 PM.

Diam	No. cut
$\frac{1}{8}$ "	11
$\frac{1}{4}$ "	18
$\frac{3}{8}$ "	2
$\frac{1}{2}$ "	1
$\frac{3}{4}$ "	1
1"	2
	25

147 311 < 1/2

Results of weighing willow bark & leaves

Leaves I 202.5g - bag

Leaves II 164.1g

Bark 251.8g

Leaves I 204.4

" II 165.7

Bark 253.2

wt of 3 bags: 69.5g

wt of each: 23.2g

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1955

327

Dec 3 Sage Hen Creek, 3 mi. NW Hobart Mills, Nevada Co, Calif.

Upper Arr. 10:30 after snowshoeing from upper end of Tilm Mdw where sno-cat had brought me. Snow a couple of feet deep and rather soft. Tracks of 3 coyotes, a hare & squirrel on S. side. Took shot 11:25 of lodge & obs tree 416 sp. B+W. S side of lodge melted. Marking schedule: ~~D~~ * Left 12 noon.

D	1	2	3	4	5	6	8	12	13
X	1	III	1	III	1	1		1	1
L				1	1		1	1	

Lower Arr. 3:35 PM. Marking schedule Left 5 PM.

NEW		OLD	
N		S	none
D	X	D	X
2	1	1	1
3	III		
8	II		
9	1		
10	1		

Hall, J. G.

1955

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